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(Entered as second class mail matter at the Postoffice at Medina, Ohio.)

THE A. I. ROOT COMPANY, Publishers, Medina, Ohio

Editorial Staff

E. R. ROOT	A. I. ROOT	H. H. ROOT	J. T. CALVERT
Editor	Editor Home Dept.	Managing Editor	Business Manager

"When we receive your Honey
Return mail brings your Money."

The Fred W. Muth Co.

Get Service Like this Man

Lake City, Mich., May 5, 1917.

Friend Muth:—Your letter with check for \$146.20 for wax has been received. Thanks. I do believe you beat them all when it comes to quick returns for goods shipped you. I may have some more wax to sell after we get our cappings melted.

Yours truly,
(Signed) Elmer Hutchinson.

We Want Immediately Extracted Honey

We buy all grades of Extracted Honey. Large or small lots. Send sample and price. If price is right we will buy. Parties who have Fancy and No. 1 Comb Honey, write us at once. We will buy from 40 to 50 carloads this season.

Beeswax

Send us your beeswax. We pay highest market prices, and send you our check the same day shipment is received.

Old Comb

Make some spare money from the wax rendered from your old comb. We will render it, charging only 5 cents per pound for rendering, and pay you best market prices for the wax rendered.

Shipping-cases for Comb Honey

We are prepared to ship you the same day order is received any number of shipping-cases. Several carloads are here now, ready for buyers. Send your order in now before our supply is exhausted. We sell Lewis Beeware.

Remember

We remit the same day your shipment arrives. Read the letter above and be convinced that this is the house to send your shipments to. Try us.

The Fred W. Muth Co.

"The House the Bees Built"

204 Walnut St., Cincinnati, Ohio

HONEY MARKETS

The honey market remains a baffling proposition. The season is practically a month late the country over, and what the crop is to be in the white-clover sections may not be fully determined yet for a month. Several weeks of good weather after this date, July 20, thruout the clover country may yet result in a normal crop being harvested. Reports of the early crop in the far West and South are not generally good. There is one decided peculiarity of honey-crop reports received this season—they are "spotted." That is to say, localities very near to each other will report almost exactly different conditions—one good, one bad.

That the price of honey is going to remain high, we cannot doubt. Sugar at this writing is higher, and honey prices are prone to move somewhat with sugar prices. A report comes from California that big bakers are refusing to pay more than 9 cents for the dark baking grades and are out of the market. But that there is a strong demand for all grades of honey the country over is certain.

We refer our readers to the prices quoted below and to special reports in our "Just News" department for the best information we can furnish on present prices and on probable future prices.

CHICAGO.—At this writing, none of the new crop has appeared on the market with the exception of a few cases of extracted from Minnesota that is little better than sweet water. What it was gathered from, we do not know. At this writing it has not been sold, it having been rejected for the reason given. What little white extracted that has come on the market during the past month has sold at about 14 cts. per lb., without any ambers from which to quote. Advices now coming would indicate that, before the month closes, there will be honey from nearby sections, and the same should meet with a ready sale, for the market is entirely free from offerings of the preceding crops, or that gathered in 1915 and 1916. Beeswax is ranging from 35 to 40 cts., according to color and cleanliness.

R. A. Burnett & Co.

Chicago, July 15.

NEW YORK.—Comb-honey stocks well exhausted, and the little left on the market dragging; prices range from 10 to 14 cts. according to quality. The market on extracted honey is very much unsettled, and prices fluctuating. California new crop is quoted at from 9½ to 11 for light amber; 12 to 14 for white, and we are informed that sales of fancy white have been made at as high as 15 cts. per pound f. o. b. Coast. Receipts of West Indian honey are normal, and uncertain at this time of the year, but find ready sale at from \$1.10 to \$1.20 per gallon, and exceptionally fine lots at even higher figures. Southern honey is in good demand, and sells at from \$1.10 to \$1.30 per gallon as to quality. It is too early to say, at this date, what the crop in the East and Middle West will be.

New York, July 18. Hildreth & Segelken.

SAN FRANCISCO.—Small lots of both extracted and comb honey, new crop, are now appearing on this market, but the supply is irregular and the demand generally exceeds the supply. We quote fancy comb honey, per case, \$3.25; No. 1, \$2.75 to \$3.00. White extracted honey, per lb., 12½; light amber, in cans, 10 to 11½; amber, in cans, 7½ to 10. Clean average yellow beeswax brings 40 cts.

Leutinger & Lane.

San Francisco, July 12.

LOS ANGELES.—Extracted, demand active, supply limited. White, per lb., brings 15; light amber, in cans, 13; amber, in cans, 11½. The hot winds reached nearly all sections of southern California. Thousands upon thousands of colonies destroyed and many car loads of honey went to waste from combs melting. Fiora dried up. Comb: no new crop yet and little being produced. No reliable quotations available.

Geo. L. Emerson.

Los Angeles, July 12.

PORTLAND.—No new comb or extracted in market as yet. Season about three or four weeks late on account of wet spring. Old stocks are nearly depleted. Prospects fair to good according to locality. Old comb honey is selling at \$3.50 to \$4.00 per case of 24 sections. Have no quotations on new comb or extracted. Containers for extracted are hard to get at any price. No beeswax offered.

Portland, Ore., July 9.

Pacific Honey Co.

TEXAS.—The honey crop is 85 per cent below an average at this time of year. A large per cent of the orders will have to be returned. As only a small portion of the honey-producing area of the state has had rain, prospects for improvement do not seem probable. We have had only one grade of honey this season, that being a very light amber. Bulk comb honey, No. 1, brings 13 cts. in two 60-lb. cans; half-cent rise for each of the smaller sizes. Light-amber extracted honey in cans brings 12 cts.; in barrels, 11 cts. Clean average yellow beeswax brings 40 cts. per lb.

Sabinal, Tex., July 12.

J. A. Simmons.

ST. LOUIS.—Our honey market is in a very unsettled condition. No new comb honey is being offered here, as it is too early for the new crop now. New extracted honey is just arriving, but none offered. We are quoting our market nominally as follows: Extracted honey: light amber, in cans, 11c; in barrels, 10c; amber, dark, in cans, 10c; in barrels, 9c. Clean average yellow beeswax, per lb., 36½c.

St. Louis, July 19.

H. Hartman Produce Co.

HAMILTON.—This market is about clear of all extracted honey. Some comb honey is left. No new honey has been offered to us yet. Fresh fruit is occupying the consumer's attention at this season. Fancy comb honey brings \$2.25 per doz. White extracted honey, per lb., in 60-lb. tins, 13½ cts.

Hamilton, Ont., July 16.

F. W. Fearnham Co.

KANSAS CITY.—We have received no new honey this season; very little on market; only comb honey; trade selling from \$3.75 to \$4.00. Crop of honey around Kansas City very poor. Extracted will sell from 10 to 14c, according to quality. Clean average yellow beeswax, per lb., 38c.

C. C. Clemons Produce Co.

Kansas City, Mo., July 18.

BUFFALO.—No new honey on this market at all. There is no extracted honey offering, nor is it possible at the present time to buy any white honey. There is a little buckwheat and No. 2 honey still left of last season which is being sold on this market at from 12 to 13 cts.

Buffalo, July 17.

Gleason & Lansing.

PHILADELPHIA.—We are unable at this time to quote satisfactorily on the honey market. No demand whatever at this season, and no offerings as yet to speak of.

Chas. Munder.

Philadelphia, July 18.

PITTSBURG.—Demand extremely light. Prices remain practically the same. We hear of no new honey being placed on the market here as yet.

Pittsburg, July 19.

W. E. Osborn Co.

TORONTO.—New honey is not yet available on this market. No prices have been fixed, awaiting the meeting of the beekeepers' association. Last season's crop is practically exhausted.

Toronto, July 19.

Eby-Blain, Ltd.

MONTREAL.—No new clover honey being offered. Stocks pretty well reduced. Buckwheat honey almost all gone. Comb honey, extra fancy, 17c; fancy, 16c; No. 1, 15c; No. 2, 13c; Extracted

honey, white, per lb., 14c; light amber, in cans, 13c; in barrels, 12½c; amber, in cans, 12c; in barrels, 11½c. Gunn, Langlois & Co., Ltd.

Montreal, Can., July 16.

SYRACUSE.—Nothing to quote on. Old honey all cleaned up and no new honey offered.

Syracuse, N. Y. E. B. Ross.

CLEVELAND.—Do not know of any honey in our market, either comb or extracted, except small lots in the hands of retailers. There is scarcely any demand and there will be practically nothing doing in honey until the new crop commences to arrive.

C. Chandler's Sons.

Cleveland, July 21.

DENVER.—A few cases of new-crop comb honey are coming in now, which sell in a local way at \$4.50 for No. 1 white, and \$4.00 for No. 2 white. Crop promises to be light. White extracted sells wholesale 16 cts.; no light amber or amber available yet. We pay 36 cts. in cash and 38 cts. in trade for clean yellow beeswax delivered here.

The Colorado Honey Producers' Ass'n,
Denver, Col., July 21. F. Rauchfuss, Mgr.

MATANZAS.—Light-amber extracted honey, in barrels, \$1.00 a gallon; amber, in barrels, \$1.00 a gallon; clean average yellow beeswax, per lb., 38 cts. Matanzas, Cuba, July 7. A. Marzol.

LIVERPOOL.—Since our last report the market has declined in consequence of the slow demand, free arrivals from Chili, and the restrictions imposed by the Food Controller on the percentage of sweetness allowable in confectionery. Up to date 1300 packages have been sold in Liverpool at the following rates, the quotations here being on hundredweights: Extra superior, \$22.08 to \$22.80; pile 1, \$21.12 to \$21.60; pile 2, \$19.68 to \$19.92; pile 3, \$19.20. 1558 packages were offered at auction in London, but only 200 sold. Jamaica, set dull, \$21.60; liquid amber, \$18.60 to \$19.20. Haytian, set palish, \$21.00. Cuban, palish, \$21.40; setting dull, \$19.20; fermented, \$16.80 to \$17.52. Californian, dark to amber, \$20.16. Contrary to honey, beeswax is firm. Up to \$55.75 per cwt. has been paid privately for good Jamaican, while for West African from Gambia the same price is quoted.

Liverpool, Eng., July 12. Taylor & Co.

MEDINA.—We have no reason to change our opinion on the market since we reported it for July GLEANINGS, page 504. Since that date, weather in the white-clover belt has been erratic. The basswood district reports an excellent flow, starting with good prospects for a crop. A considerable volume of extracted has been received in the past 30 days from the tupelo, orange, sage, and mesquite districts. Offerings from the Pacific Coast indicate a somewhat easier market there. As previously stated we think white extracted honey should net producers 10 to 12 cts., and white comb from 14 to 16 cts. per pound.

A. I. Root Co.
Medina, July 24.

U. S. Government Market Report.

Below is printed the third semi-monthly honey-market news report issued by the Bureau of Markets, U. S. Department of Agriculture, date of July 13:

New York.—Six barrels Florida, 38 barrels and 17 cases West Indian, arrived; no comb-honey arrivals. Extracted stock: market active, demand good, stronger; active buying for Italian export, resulting in wide range in prices; Southern, 12 to 13c; some sales reported 15c. West Indian: 12 to 14c; some 15c per pound. Beeswax, arrivals unreported; supplies adequate; demand light; yellow, mostly 45c; dark, mostly 43c per pound.

Kansas City.—Local receipts about 25 cases new honey; old crop, supplies practically exhausted. Demand good, movement moderate, market firm, all sales in small lots. Native Missouri old stock, firsts, 24-section cases, mostly \$4.00 to \$4.25; seconds, supplies exhausted. New stock, first, mostly \$4.25. Supplies extracted stock exhausted. New crop late this year, and will be very light.

Chicago.—No carlot arrivals. Supplies practically exhausted, not enough to make a market. First shipment new, few cans Minnesota; rather light color, 12c. Old extracted, few sales, 12 to 13c per pound.

Cincinnati.—One car California; 32 crates Georgia, 75 lbs. each, arrived. Light local receipts. Market very unsettled, few sales. Comb honey, old light amber, \$3.60 per case; no new stock on market. Extracted, old stock; dark amber, 13c; light amber, 15c. Nearby, new honey, few sales; small lots; cash paid to beekeepers, extracted dark honey, amber, 8½c per pound. Nearby honey expected to move heavily in two weeks.

Philadelphia.—Thirty-three barrels Southern, extracted, no imports; no comb honey arrived. No demand, no sales. Quotations reported are merely asking prices. Extracted, jobbing in barrels, Southern, 10 to 12c; California, light orange, 60-lb. tins, 13c per pound. Comb honey, no quotations.

St. Louis.—No fresh arrivals. Bright amber in barrels, 8½c; in cans, 9 to 9½c; dark amber, ½ to 1c less per pound. Comb in case, amber, 10 to 12c per section; dark and inferior, 9 to 10c. Fancy clover, 14 to 17c per section.

Minneapolis.—No new stock arrived. Supplies old stock practically cleaned up. Few sales.

St. Paul.—No new stock arrived. Supplies old stock practically cleaned up. Few sales.

Government Honey-Yield Estimate.

The monthly crop report, published by authority of the Secretary of Agriculture, for July, estimates the yield of surplus honey per colony to July 1, in the various States, as follows: Maine 3 lbs., New Hampshire 5, Vermont 3, Massachusetts 10, Rhode Island 18, Connecticut 9, New York 3, New Jersey 15, Pennsylvania 6, Delaware 18, Maryland 29, Virginia 20, West Virginia 12, North Carolina 15, South Carolina 25, Georgia 29, Florida 33, Ohio 13, Indiana 9, Illinois 7, Michigan 1, Wisconsin 6, Minnesota 5, Iowa 5, Missouri 9, South Dakota 5, Nebraska 5, Kansas 13, Kentucky 13, Tennessee 16, Alabama 9, Mississippi 22, Louisiana 30, Texas 20, Oklahoma 9, Arkansas 35, Montana 10, Colorado 4, New Mexico 10, Arizona 41, Idaho 5, Washington 12, Oregon 2, California 33. The proportion of the full crop usually produced up to July 1 is from 65 to 80 per cent of the total crop in the Southern States, and from 7 to 50 per cent of the total crop in the Northern States. The average proportion of the total crop in all the States produced up to July 1 is estimated by the Government to be 50.8 per cent of the total production of the year; but this proportion varies from 7 per cent in Colorado to 80 per cent in Louisiana.

WANT HELP? WANT A POSITION?

Almost daily GLEANINGS receives from one to a half dozen inquiries from beekeepers who want help in their apiaries, or from men who want employment in apiaries.

The job and the man ought to be able to get together—and they can.

This is the best way we know of doing it: Put an advertisement in either the "Help Wanted" or "Position Wanted" department of GLEANINGS. It will cost you 25 cents a line (9 average-length words to the line) for one insertion of such ad.

Try it—for the job and the man ought to get together.

Address Advertising Department, GLEANINGS IN BEE CULTURE, Medina, O.

Seasonable Supplies

Fine Italian queens for August requeening

Five and ten pound friction top pails

Cases of two five-gallon cans

Shipping-cases

Cartons, Honey-labels

Beeswax wanted

Extracted honey wanted

Let us quote you our prices

M. H. Hunt & Son, Lansing, Michigan

General Agents in Michigan for Root's Bee Supplies

NOTICE!

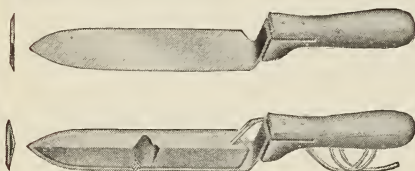
Honey . Wanted . Honey

Do not forget, when your crop of honey is ready for sale, to send us a sample. State your price, also how it is put up. We are in the market for unlimited quantities, and will pay cash on arrival. Let us hear from you before selling your crop.

C. H. W. Weber & Co., Cincinnati, O.

2146 Central Avenue

NEW BINGHAM BEE SMOKER



In 1878 the original direct draft bee smoker was invented and patented by Mr. T. F. Bingham of Michigan. Mr. Bingham manufactured the Bingham Smoker and Bingham Honey-knife for nearly thirty-five years; and in 1912, becoming a very old man, we purchased this business and joined it to our established business of beekeepers' supplies and general bee-

ware. Those who knew Mr. Bingham will join us in saying that he was one of the finest of men and it gives us much pleasure to help perpetuate his name in the beekeeping industry. Bingham smokers have been improved from time to time, are now the finest on the market, and for nearly forty years have been the standard in this and many foreign countries. For sale by all dealers in bee supplies or direct from the manufacturers.

Smoke Engine, 4-inch stove.....\$1.25
Doctor, 3 1/2-inch stove......85
Two above sizes in copper, 50 cts. extra
Conqueror, 3-inch stove......75
Little Wonder, 2 1/2-inch stove......50
Hinged cover on two larger sizes.
Postage extra.

Bingham Honey Uncapping Knives with New Cold Handles

We are furnishing the same quality steel, best money can buy, thin-bladed knives that Mr. Bingham manufactured years ago. The old timers all remember these knives and many are writing in as Mr. Volstad in the following letters. The substitutes offered

by others have not given the satisfaction desired.

A. G. Woodman Co.

Gentlemen:—Have you the thin good-working uncapping-nives we used to get about 20 years ago, and that worked to perfection?

We sent an 8 1/2 and 10 inch knife and received the following letter.

A. G. Woodman Co.

Gentlemen:—Knives received, glad you sent them at once. They are just what I want and have been looking for but did not know where to get them.

Many of the most extensive honey producers insist on the Genuine Bingham knives. Mr. N. E. France of Plattsville, Wis., gave us a fine unsolicited testimonial on the steam-heated Bingham knife, too long for this space. Present prices are: 10-inch knives, 85 cents each; 8 1/2-inch knives, 75 cents each; steam-heated knives with tubing, \$2.50 each. Postage extra.

Lyle, Minn., June 21, 1917.

K. H. VOLSTAD.

Lyle, Minn., July 5, 1917.

K. H. VOLSTAD.

TIN HONEY-PACKAGES

The tin-plate situation is becoming more serious from day to day and prices have taken a steady advance for the last year and a half. Prices still continue to advance slowly and at the present time it is almost unobtainable. We purchased enough tin plate for our bee-smoker trade to last us a year or more, before the war was declared. It would be a hard matter for us to get it at any price now. Our three-year contract on tin honey-packages is still being honored and runs to Jan. 1, 1919. Prices are adjusted every three months, but we are considerably under present market prices and we are saving money for carload buyers and others of smaller lots. Send us a list of your requirements and let us figure with you.

FRICITION-TOP TINS

	2 lb. cans	2 1/2 lb. cans	3 lb. cans	5 lb. pails	10 lb. pails
Cases holding	24	24	...	12	6
Crates holding .....	...	...	...	50	50
Crates holding	100	...	100	100	100
Crates holding	603	450	...	203	113

A. G. Woodman Co., Grand Rapids, Michigan

SEASON OF 1917

What is Your Report?

The white-honey crop is two weeks late in New York state on account of the cold backward spring and so much rain. If you secured a crop you will need shipping-cans. . .

We have quite a supply of these for immediate shipment. . . Later there may be trouble in securing them. Better estimate how many you will need and send in your order. Remember, the cases are already packed up in lots of 10 and 50. Any other number will cause some delay in shipping.

F. A. Salisbury, Syracuse, New York
1631 West Genesee St.

LEWIS BEEWARE

is at your very door

Send to Your Nearest Lewis Distributor for
**Lewis Hives and
 Lewis Sections...**

Hold to
 the "Beeware"
 trademark



It is
 your safest
 guidepost

Lewis Distributors:

California.....	Bishop, W. A. Trickey.
Colorado.....	Denver, Colo. Honey Producers' Ass'n.
Colorado.....	Delta, Delta Co. Fruit Growers' Ass'n.
Colorado.....	Grand Jet., Grand Jet. Fruit Growers' Ass'n.
Colorado.....	Rifle, C. B. Coffin.
Idaho.....	Caldwell, Idaho-Oregon Honey Prod. Ass'n.
Illinois.....	Hamilton, Dadant & Sons.
Iowa.....	Davenport, Louis Hanssen's Sons.
Iowa.....	Sioux City, Western Honey Producers' Ass'n.
Iowa.....	Emmetsburg, H. J. Pfiffner.
Michigan.....	Grand Rapids, A. G. Woodman Co.
Montana.....	Fromberg, B. F. Smith, Jr.
New York.....	Newark, Deroy Taylor Co.
Ohio.....	Cincinnati, Fred W. Muth Co.
Oregon.....	Portland, Chas. H. Lilly Co.
Porto Rico.....	Ponce, Prats & Vicens.
Tennessee.....	Memphis, Otto Schwill & Co.
Texas.....	San Antonio, Texas Honey Producers.
Washington.....	Seattle, Chas. H. Lilly Co.
Wyoming.....	Wheatland, Fred M. Harter.

G. B. Lewis Company, Watertown, Wis.
 Manufacturers

GLEANINGS IN BEE CULTURE

AUGUST, 1917



EDITORIAL

EVERY HONEY-PRODUCER, in any discussion of honey markets and prices to-

*IT'S UP TO
THE HONEY-
PRODUCER.*

day, should keep clearly in mind one central fact, and that is this:

Honey prices and markets may be made very largely by the producer, and he can and should determine them.

Low prices for honey in the past have been the result of the producer's own part played in the market. He has sold at a low and unprofitable price when he could have got more by fixing his price right. Especially is the beekeeper who sells direct to the consumer or the local grocer the sole maker of the price, and all too often he has made that price far below the worth of his product.

As illustrating what we have in mind, we recall an incident in the Wisconsin field. Carload buyers made a price in a certain locality there that was accepted by some honey-producers and rejected by others. After the big buyers had quit the field, a large number of the producers that had rejected the carload offers laboriously peddled out their crop as they could, at a figure actually lower than the big buyers had offered to take it at their doors. These beekeepers not only knocked down the price of their own honey and established a low local figure to be used against them in future years, but they made the legitimate figure for the honey as finally bottled, labeled, and got on the market by the wholesalers look like robbery. They bludgeoned their own business all along the line.

It is the lack of business foresight and haphazard selling on the part of honey-producers themselves that have in the past made a low-price honey market and an uncertain and unstable market. Ignorance of the honey market—knowing nothing of price quotations—has been another contributing factor to a low and undeterminable market. The producer cannot expect

the big buyers to offer him right prices when he is ignorant of the market and often sells his product far below its real value. In sheer self-defense against the competition of other big buyers, every one of these big purchasers is going to get his honey at as low a price as the producer will sell it. He sets his price (his first offer, anyway) at the possible figure of the honey-producer who doesn't know the market, and who in the past has sold his honey at any and every price.

The seller in his local market is especially to be warned against selling at too low a price. He is often tempted by any price above that offered him by the big buyers. But what he should consider is the fact that before that big buyer has got his honey bottled, labeled, packed, freight paid, etc., and on the market, a minimum cost of 5 cts. a pound has been added. A bottler who buys at 10 cents today must sell wholesale at more than 15 cents; and before the consumer gets the honey the retail merchant must have his cost of doing business out of it and a small profit. Now, then, the beekeeper who sells his honey locally should not set his price by what the big buyer offered him at his door, but by the price that the local grocer has to get after the honey has gone thru the bottling process and the usual lanes of wholesale trade. If the local seller does not do this he neglects his own right, and he injures the honey market everywhere.

Honey cannot take its rightful place as a staple food product, with a stable, quotable market price and a right price, until the honey-producer himself selling in his local market (at cost of much labor and time), to either consumer or retail merchant, fixes his standard of price—not by wholesale buyer's price for the raw product at his door, but by the price of that product after it has gone thru the bottler's hands and returned thru wholesale channels to the retail merchant's store-shelf.

The beekeeper, selling locally, must sell

at about the grocer's price, or he is doing himself an injustice and is helping to keep honey down and its market unsatisfactory and unstable. The greatest enemy to higher honey prices in the past (and today) is that beekeeper who doesn't know the market and sets his standard of price for local sales by the car-lot figure offered by the big buyer and bottler rather than by the price of the bottled and labeled product on the retail grocer's shelf.

Until the honey-producer clearly recognizes this truth and acts on it firmly, the price of honey is going to remain uncertain, unsatisfactory, and lower than it should be.

It's up to the honey-producer himself.



WE ARE AGAIN having reports of bees dying in large numbers in a few localities.



IS IT THE
ISLE OF
WIGHT
DISEASE?

The symptoms tally very closely with those reported for the Isle of Wight disease, of Great

Britain, or the disappearing disease, as it has been called in this country. It affects only the adult bees; and whatever it is, it seems to attack old and young bees as well as drones alike. But it has no effect on the brood in any stage of growth. In yards where the disease appears, bees will be found out in front of the entrances, nervously running about, crawling up spears of grass and trying to fly. They seem to be in great distress, running around till exhausted. As the disease advances, the bees seem to be tugging away at their wings, and scratching their bodies with their legs as if itching or in pain. In the more advanced stages they will be found with wings out of joint crawling around the apiary, and even several rods away. Sometimes only one colony is affected, while the other colonies in the yard are in normal condition. In other instances there will be four or five colonies near together, and all afflicted with the same trouble.

So far as reported in this country, the disease comes and goes. Sometimes it cleans out the colony entirely, and sometimes only a small proportion of the bees die. In one instance where it was very bad last summer it disappeared, and did not occur again in that yard until this summer.

In one yard which we recently examined the disease was reported to be very bad about two weeks ago. At the time of our visit recently it had all but disappeared and a big crop was being harvested.

We have never seen it in our Medina

yards, altho a few years ago we found a few bees crawling up some spears of grass. The number was very few.

We should be pleased to learn if others have seen any of the symptoms of the disappearing disease; and if so, have any of the symptoms of last summer reappeared?

It should be explained that this disease of which we speak is very much unlike bee paralysis. The bees are not black and shiny, nor are the abdomens distended. A paralytic bee is logy, while a bee affected with the other disease is as lively as a cricket until it exhausts itself by constant running and by its hurried rush thru the grass. Except for extended wings, constant running in the grass, and general uneasiness, and a tugging of the legs against the body as if itching or in pain, the bees appear to be perfectly normal. Externally there are no symptoms expect in the general behavior.



SOME OF OUR apiaries in the early part of the season are used for supplying nuclei



and pound packages and whole colonies of bees. Others are devoted exclusive-

ly to queen-rearing. When a colony loses three frames of brood and bees or a pound of bees in June, it is crippled for honey-production; but such colonies when weather conditions are favorable, followed up by the proper kind of manipulation, may often be in good condition for extracted honey, altho they will generally be too weak for the production of comb unless the season is late.

This year the dandelions helped out amazingly in brood-rearing, for our colonies were depleted by the sale of bees and queens. The result was, brood-rearing was kept up to a high pitch for nearly a month, because the dandelions kept in bloom owing to the backward rainy weather for a much longer period than usual. It was astonishing how some colonies built up from some four or five frames of brood and bees. Where queens were unusually prolific we drew from their colonies frames of hatching brood and gave to the weaker colonies. The result was that most of our colonies were of very nearly even strength about the first of July, but not up to good honey-gathering strength. As the colonies continued to build up we worked the hatching-brood principle still further. When any colony reached a point where it was boiling over with bees, and was likely to

swarm, we put on an upper story with an excluder between. All sealed or hatching brood was placed above, and all unsealed brood with the queen was placed below. The object of this was to give more room for the queen; and as the hatching brood emerged this would provide additional room in the supers for some ten days or two weeks later. The plan has worked out well. By extracting time there will be little or no brood in the supers.

Not a few extracted-honey producers have been practicing this plan of putting all the sealed brood in the supers and the queen and unsealed brood below by means of an excluder. It keeps down the swarming tendency, automatically supplies room for the storage of honey as the brood hatches out and gives more room in the brood-nest.

This summer our Mr. Pritchard in one or two of his outyards has been practicing a different plan. When colonies were boiling over in strength so he had to put on upper stories, he caged his queens and kept them caged for a couple of weeks. In the mean time, honey came in with a rush, and the bees stored both hive-bodies full of honey. As they could not swarm out without the queen, they could do nothing but store honey. Of course he cut out the queen-cells.

The plan has worked out well, says Mr. Pritchard. It has the advantage that swarming is held absolutely under control.

There are some, however, who dislike the bother of cell-killing and who believe that a colony with a caged queen sulks or does not work with the same energy as where their queen has the range of the lower story. They therefore prefer to work with queen-excluders with hatching brood above. But cells must sometimes be killed in the upper story.



DURING THIS YEAR, when the whole wide world is asking for a speeding-up in



**BUCKWHEAT
A PROFIT-
ABLE CROP**

the food production of the United States, there is no one crop that can be put

in to help out more than buckwheat. It is a quick grower, maturing in from 50 to 60 days, and can very often be put in between two other crops to good advantage, thus increasing the amount of food per acre. It is a wonderful exterminator of weeds; and when grown between other crops the land on which it is grown will often be mellow enough to put in either wheat or rye afterward, without the use of even a drag. The wheat or rye is simply drilled in on the

buckwheat stubble. As to which should go in will depend on the time the crop is harvested. In case of a very late crop it may be advisable to put in rye in place of wheat.

Almost any soil will do providing it is well drained; but any soil is improved for the growing of buckwheat by the use of fertilizers. Enormous yields have been secured on clover plowed under—as high as 40 bushels per acre. Moreover, buckwheat itself can be plowed under just after the blooming period, to the great advantage of the land for a following crop. Plowing under is often practiced when there is danger of frost killing before the seed can mature.

While buckwheat can be grown in the spring, there is always danger of hot weather setting in later on, or an early frost killing it.

Buckwheat is put in from June 20 up to Aug. 20. Where there are many bees in the locality and honey is desired as well as grain it is advisable to put in one crop about June 20, another July 1, another July 15, Aug. 1, and Aug. 15. The crop put in in June is liable to be blighted by too much hot weather; but it is not usual to put in buckwheat much before July 1 nor later than Aug. 1. Buckwheat may mature in 50 days, but usually it takes from 65 to 70 days. One must, therefore, take into account his particular locality and the probabilities of frost in September.

Buckwheat honey sells readily in localities where the plant is grown extensively; particularly in Albany and New York City; but it is of rather slow sale in markets where it is unknown. It usually commands a good price—very close to clover.

In practically all localities buckwheat yields nectar a little while in the morning, say from eight to twelve o'clock, and then again toward evening. In the interim the bees are apt to be pretty cross, as they always are when there is a stoppage of the honey-flow, either on account of rain or of a sudden drop in temperature.

AMOUNT OF SEED PER ACRE.

This is a mooted question. Some say two pecks is enough; others say three pecks is about right. Others go so far as to urge a bushel per acre; and when the Japanese variety is used, 1½ bushels is advised. Usually three pecks is about right, especially if the silverhull or common black is used. Japanese requires more seed per acre. Experience seems to show that silverhull and the common black buckwheat yield more honey per acre than the Japanese. The older varieties branch out more and furnish

more bloom; and, while the seed is smaller, there is more of it per acre.

There is a tendency just now to abandon the Japanese, both for flour and for honey. While the Japanese seed is larger than the seed of the common black, it has been claimed that it does not yield more flour.

There are some sections of the United States that are more favorable for the growing of buckwheat than others. Buckwheat is grown extensively in some of the central counties of New York, particularly Schoharie, Schenectady, and Montgomery. In these counties buckwheat is counted as one of the most prolific sources of honey; and following, as it does, immediately after clover and basswood, it increases immensely the earning power of a colony, because at the close of the white-honey harvest the bees are in splendid condition for gathering a crop of buckwheat and goldenrod, which often come in at the same time. Buckwheat is also grown to some extent in Ontario, and yields considerable honey. It may also be found in Michigan, Wisconsin, and Minnesota. It is not grown extensively in the South, nor west of the Mississippi River.



THE NATIONAL CANNERS' ASSOCIATION, whose members comprise the largest



THE HONEY-CONTAINER SITUATION.

tin plate and of tin cans in this country, has sent

widecast a public letter which in part says: "The impending shortage in tin plate and tin cans has been averted. By careful economy in the use of tin cans the supply will be equal for all necessary demands."

We hope that this is true, or very soon will be true. But just at this time we know that tin-can manufacturers are filling orders very slowly and that they have very recently advanced prices to what seems an almost prohibitive figure. It occurs to us that the tin-can manufacturers may mean that they can supply their trade at the enormously increased prices asked by these manufacturers. It is undoubtedly true that manufacturers of almost any necessity can supply the demand that is willing to pay any price that the manufacturers will put on.

At present, dealers in cans are very likely to be short in some sizes, and they experience great delay in securing these exhausted sizes from the manufacturers, and where the price of tin cans will go to, judging from the increased quotations of the manufacturers, no one can predict.

What we have said about the tin-can supply, and what the manufacturers are doing in the way of supplying dealers for their trade, may also be said of the glass situation. Most dealers have a considerable stock of glass containers of various kinds, but these dealers are very likely to be out of certain lines of glass containers (and these likely to be the most called for), and they find it very hard to secure a new supply from the manufacturers, even at the greatly increased quotations. Every dealer in glass containers knows that there is no certainty when he can secure an order from the manufacturer, with the consequence that many of his customers must be disappointed and greatly inconvenienced.

If we were going to modify what we have said in previous numbers of GLEANINGS as to the container situation, it would be to say this: The honey-producer *may* be able to secure both tin and glass containers before the end of the honey season; but just when or at what price is altogether uncertain.

The honey-producer who has his containers in stock, or has the assurance of his dealer that he can supply him out of stock already in the hands of that dealer, is fortunate. The honey-producer who has to secure containers that his dealer has yet to procure from the manufacturer is likely to be greatly annoyed before he can secure his supply.

Whatever the manufacturers of tin cans and glass containers may say as to averting an impending shortage, it is certain that they are very slow in filling orders, but are not nearly so slow in advancing prices to a hitherto unheard-of level.



SOUTHERN QUEEN AND bee rearers should be charitably judged this year for

making delayed deliveries. They have had *THEY HAVE HAD A HARD SEASON.* most every disadvantage to contend with. The

late cold spring and continued bad weather made rearing late and delayed orders inevitably. Piled on top of this was the great increase of correspondence made necessary to explain delay of shipments or to answer complaints because of delayed shipments. It has been as one prominent Southern bee-breeder wrote us: "We have just simply had to do what we could (and that was a lot) and leave the rest undone." So, those ordering bees and queens from Southern breeders this year should not judge them too harshly even if orders have been greatly delayed.

MANY IDEAS ON SELLING HONEY AND HONEY PRICES

Plans and Ideas from the Producers—the Ones Most Vitally Interested in the Disposal of the Crop

Little Chance for Co-operative Selling

IT would seem an easy matter to get a bee-keeper in successful touch with others whose crop has been a failure, or with those who by easy stages have built a trade far in excess of their production.

But after one season trying the game, I should like to tell a few of the reasons why I fail to see any bright outlook for co-operative selling. I began some seven years ago with one colony. Four years ago I found I had more comb honey than I could dispose of at home. Being on a good road for auto travel I made a canvas comb-honey sign which I swung across the road (GLEANINGS, 1916, p. 849). That season I had 40 sections left when the roads got bad. The next season, while I secured a larger crop, I did not have enough to supply my demand; for as I stamped my name on each section, I secured by mail many case orders for shipment. Seeing the handwriting on the wall I secured by purchase and increase still more bees and began to put out feelers to small producers for prices of comb and extracted honey in 500-pound lots.

Last year my troubles began in earnest. I had a very large crop for this location. It was mostly extracted, and so I began to look about for comb honey. For retailing I obtained from a producer a crop of No. 1 comb at 17 cts. This was all right; but I had been accepting orders from grocers who expected to make 20 per cent; and to sell at 25 cts. per section, and for this trade, I found my margin was too small. When the auto trade was over and my honey was about gone, my sales continued to increase daily and were nearly \$150 per month (a little later they were about \$200). I began corresponding with producers, and I found they all wanted from 17 to 19 cts. for No. 1 sections, and expected me to pay the freight. Now, at various times I had received orders from a wholesale house in New York, so I decided to try *buying* of them instead of *selling*. I found that I could secure No. 1 comb at 15 cts. and quite often at 14, and the fancy at \$3.88 per case. The latter I sold to choice trade only. I bought 25 cases from New York at 14 cts., twelve of them being from a producer who had asked me 17. Now, why the difference? If that man had offered to sell at 15 cts. I would have purchased his entire stock. Would he not have been ahead? No wholesale house

handles honey for its health, yet up to Dec. 1 I bought barrel after barrel of white clover from New York at 8 cts., and many producers asked 9 and even 10. Of course this season was an exception, and some of them, no doubt, secured their 10 cts. or more. I bought one barrel from New York at 7½ cts., and wrote immediately to the producer, but found he asked me 9 cts. in Florida.

An Ohio man quoted comb at fair price, and I ordered a carrier. The grading was poor, 29 sections being No. 2 instead of No. 1 as quoted. My New York shipments are only two or three days on the road; but this was 22 days in coming; and the freight, instead of being 18 cts. per hundred, was 65 cts. If this honey had been graded properly I should have made 2½ cts. per section. As it was, I lost money. Why can't one grade as well when selling to a co-operator as when selling to a wholesaler? One man kindly informed me that he could slip in a few No. 2 with No. 1; and as there was only 4 oz. difference between the grades, these few sections would escape notice; and if I could use the honey that way he could make me a price of 20 cts. flat! Even at that, the price would be above my selling price in lots of five cases or more.

Now, there may be other reasons for the failure of co-operation; but I am telling only what I know to be true in my case alone; and I say that, as long as the producer demands of the one who has gone beyond his home market as much as or more than he does of a near-by wholesaler, just so long will the co-operation seeds fall on barren ground.

Wading River, N. J.

S. POWERS.

Careless Grading Never Pays

"Can I get by with it?" This question naturally arises in the minds of many people when they are about "to put one over on the other fellow." We answer, "Yes, you may; but you will pay in the end for your tricks. Do not think that you can fool all the people all the time, just because you have deceived some of the people part of the time. It does not pay to take a mean advantage of a man just because he is not standing over you with a shotgun."

In grading comb honey it is poor policy to think, "I will slip this one into the fancy grade. I will put that one over on

the future buyer." As surely as one does this there will be a reaction. He will soon be sized up, his trade divided, and his reputation gone. Many farmers put the big potatoes on the top; but the buyer always gets to the bottom. Of course he should not cheat himself by putting all the poorest on top. But he should be on the square. The grocer does not expect fancy mixed with No. 2 when he buys for No. 2 price. The cut-rate grocer has a right to buy and sell cut-rate goods, the price being agreed upon and the quality and quantity considered; but the goods must be just as represented if he is to have repeated orders.

A REPUTATION.

A reputation for square dealing is worth a gold-mine. We have in mind some fruit-growers' associations with strict inspection rules. Their goods always bring a premium. We had two cars of comb honey from one shipper in which not a single case was "off." Don't you think such shippers are entitled to get better prices and prompt sales and returns? They create a demand for their goods.

For this year increased prices are assured, no matter how big a crop. To say comb honey may bring a dollar per case more than the 1916 crop is a conservative statement. Let us do all we can for a bumper crop, market our comb honey early, and get the best results. G. P. STARK.

Mgr. National Honey Producers' Ass'n.
Kansas City, Mo.

Eliminating the Middleman

The articles on selling honey have prompted me to give some of my experiences. Our grocers are poor individuals to depend upon for the disposal of our honey. I have had some of them expect 50 per cent in commission, and it is now worse than ever, since the war gives them an excuse to exact untold profit from the public. As an example, a neighbor had some choice surplus garden truck to dispose of, and received only 1/2 ct. a bunch for early beets, while her commission shark retailed them at 8 cts. per bunch or two bunches for 15 cts. Her other vegetables brought in quite as discouraging results. Since then she finds her own customers and receives much fairer returns for her toil.

Our experience in disposing of honey has been much the same, and we find it far from pleasant to sweat and toil thru the summer months and then have the grocers offer such low prices saying, "Why, I bought some honey from a man last week at \$2.00 per crate." Perhaps they show you a sample—

a dirty, propolized section weighing less than ten ounces. And even after they have seen your perfect sample, your price still seems to puzzle them, and they refuse to buy but continue to retail that same rusty stock at 25 cts. It is just such experiences as these that have caused us to solicit orders for retail sales and then make the deliveries.

In selling and creating a want for our product, we find it a good plan to attend large gatherings of people at picnics and fairs. Also repeated orders will follow as a result of a daily or weekly advertisement in the local papers, letting people know that you are doing the same old business at the same old stand, and that "Attractive goods and prompt delivery" is your slogan.

Mays Landing, N. J.

C. L. HILL.

Everybody Busy Trying to Grab

Colonies are in fairly good shape. I think I am running more than any one else; and while there is a great deal less clover than last year, yet there is enough providing we get the right weather. We contracted to sell all our honey crop at an advance of a quarter of a cent per pound on last year's prices. This was done in the face of the talk of enormous increase in prices. I am utterly disgusted with the grab and greed of the present day. I have said time and again that, taking the human race as a whole, every one seems to be so busy trying to grab that he cannot devote any time to preventing the other fellow from grabbing from him. It has been amply proved that in many cases enormous sums have been made by speculators; and I, for one, should I be living that long, want to be able, when the crash comes, to be able to look every one in the face and say, "I had no part in it."

Looking at it from a selfish standpoint the price that honey has sold at has done much to bring it into use and popularize it. I quite concede the value of some having brought honey in advertising before the public; but the price also has popularized it.

We shall probably have a very large apple crop, none of which is likely to be exported, for not enough ships can be secured to transport what is considered much more necessary. Abundance of fruit always influences the demand for honey.

Prices in the United States have been about three cents a pound lower than in Canada, and the prices which prevailed last winter in the United States have only reached what our prices have been for some years.

Perhaps many will not like what I have said; but they are welcome to throw all the stones they please. But to prevent any one from attacking me on the ground that I am not interested, let me say that there is probably no one in Canada who has a better chance of securing a good honey crop than we have.

R. F. HOLTERMANN.

Brantford, Can.

Don't Ask the Consumer too High a Price

Last season I sold nearly 5000 lbs. of my own honey, and also some that I had purchased. I asked only one man (a merchant) to buy. I was sorry for having asked him, as I could have sold it all and realized more money.

I first study the market prices in the different centers, and then begin by putting my price a cent or two above the whole-sale. I would discourage selling to middlemen, as I think the commission men want to extract too large a profit, and therefore the honey business is hurt. The syrup manufacturers get the consumer's trade. There is one syrup manufacturer in this country who prints the picture of a beehive on his syrup labels, which I contend is misleading, and tends to hurt honey sales. This should be stopped.

I would rather sell my honey to the consumer at a wholesale price than ship to a commission house, as the freight and tins are saved to me, and the public is thereby encouraged to use honey, which in the end gets me more for my honey than any other way.

Don't drive the consumer to invest in other lines by asking too high a price for your honey.

GEO. W. STRANGWAYS.

Elora, Ont., July 11.

No Trouble to Sell Honey at a Country Fair

The illustration shows my honey display at our fair last fall. Fifteen years ago I started selling my honey this way, and now I cannot produce enough to go round, so I have to buy. It takes over a ton of honey to last the two days.

I have often wondered why more beekeepers do not sell their honey at fairs. There is no way that will sell the honey like having lots of bees and queens, and showing them. When the people see them they become interested and are sure to buy some honey before they go. My observatory hive is 4 ft. high and 5 ft. long, with a big glass front all filled with brood-frames,



E. C. Miller, East Claridon, Ohio, sells over a ton of honey every year at a country fair.

extracting-frames, and sections at top. I had a nucleus hive out in front so people could get right up close and see the queen lay eggs. My exhibit was 15 ft. long and does not show all on card. It is no trouble to sell honey at a country fair.

East Claridon, Ohio. E. C. MILLER.

Swapping Honey for Grain

Many of the farming class give but little attention to the garden and fruit-growing, their time and attention being fully occupied with the farm and stock-raising. Years ago I found that many who would not purchase for cash would gladly exchange grain for honey. So just after thrashing-time I could start out with honey in 5 and 10 pound pails and return with a load of grain, as from 5 to 20 lbs. would be left at almost every house.

Then in January and February when preserves were largely used up and housewives in villages and country were hungry for something to "piece out" till maple syrup came in these pails of honey just filled the bill. In this way hundreds of pounds were worked off at good prices.

Season is late here, but prospects are good.

Toronto, Ont.

F. P. CLARE.

If You Expect a Good Price, Ask it

In response to your query, "How shall we get the most for our honey?" I will suggest that the answer may be found in two words, "Ask it." It is perfectly plain to me that if we don't ask enough we shall not get enough.

Many beekeepers have not sufficient confidence or vision to expect a good crop; and then if it comes to them unexpectedly



G. W. Nance, Anthon, Iowa; 10,000 pounds of honey direct to the consumers.

they are in a "blue funk" and cut the price for fear that they can not sell, which reminds me that "A fool and his honey are soon parted."

I have been raising and marketing honey for over thirty-five years, and will say that the price of this season's crop is about the last thing I should worry about. For the last four or five years we have been getting ten to fifteen cents per pound for our fine clover extracted, none less than ten cents in 5 to 25 case lots in bulk just as it came from the extractor. With the prices of all kinds of food products advanced fifty to one hundred per cent there is no likelihood that honey will go downward unless other things do.

For this season's entire crop, be it large or small, we have a standing offer of twelve cents at Oberlin; but as we are now getting fifteen at wholesale I see no reason why we should not get as much or more for the new crop.

Oberlin, Ohio.

CHALON FOWLS.

Fording Direct to the Consumers

My apiary of 125 colonies produced 10,000 pounds of honey last year. In the foreground of the illustration is my Ford honey-car by means of which I am able to dispose of about all my crop direct to the consumers. On making a trip I ship about 3000 pounds of honey ahead of me and then come along in my Ford and pick up

whatever I may need up to 600 pounds. I sell about \$50 worth per day, at the rate of five pounds for 75 cts. or a ten-pound pail at \$1.50.

Anthon, Iowa.

G. W. NANCE.

And so Could He Really Blame the Other Fellow?

June GLEANINGS is full of interest as usual, and I take it for granted you won't expect even me to agree with everything. I likewise take it for granted you'll say "Flubdub!" likewise "Pish!" or even "Tut! tut!" at what follows:

One time a certain man sat him down and inveighed bitterly at the minus-patriotism of a certain rich man. "The country needs powder; 50 cts. would give him a good profit, and he insists on 75 cts. The Benedict Arnold!" And he wailed and wrung his hands at the hardhearted.

He also used strong words of wrath at certain other men who bought up all the grain of the land, even as did Pharaoh in the days of Joseph, and sold it at a price, whereat flour went skyward toward the \$20 mark. "These men are the scum of the earth! They grind the face of the poor, and give them but dust to eat and the grass by the roadside. Could they corner the air we breathe they would do so and sell it at a great price. A lamppost and a rope for each of them would be their just merit!" And he smote the clapboards of his house

with a heavy cane and a resounding whack; and the dust flew.

He also had certain unpublishable words that scorched the air as they flew, even as do lightning bolts, and evil was the smell thereof, relative to the doings of men of meat who sold great sales thereof to the allies at a price, and in the vacancy thus created found argument for jacking up the price of what was left to their own folk. "These men first make a scarcity and then exploit it; and no man goeth to market in hope of getting food for his little ones at a price that he hath money wherewith to pay. What shall be their portion when for them at last comes eternity?"

He also was unable to find voice at all for many moments; and when he found it the neighbors round about regretted greatly, on learning that his wife had been unable to buy more than 10 pounds of sugar at one time at the grocery, and for that must pay 10 cts. or even more per pound for it, which one time had cost but four and a half, and the rise in price did not produce to the common people one pound more in quantity, and but added one more brick to the burden of dead weight that already they were carrying, and which was slowly crushing them to earth.

Then that certain man hied him to his apiary and figured long and earnestly over the products thereof whereby he might lighten the burden of those sugarless folk and of their foodless children? Oh, no! How much he might add to *his* price at which he sold to them—and get away with it.

JOHN PRESTON TRUE.

Boston, Mass.

Garage Good Place to Advertise

Altho I am not a beekeeper, still I have taken GLEANINGS for a number of years, being especially interested in the "Home Department."

In our garage business we are often asked concerning some good place to go, for the city folks love to drive fifteen or twenty miles into the country if they only have some object in view. So on reading E. R. Root's article, "Selling Honey by the Roadside," it occurred to us that there are any number of garage men who would be pleased to have a neat little sign hung up in their garage stating that honey may be obtained of John Jones at Pleasant View Farm, fifteen miles out on the Farrington road.

The average garage man likes to cater to the wishes of his customers, and we believe he would be glad to co-operate with

any beekeepers in the way we have suggested.

Peoria, Ill.

CHAS. L. TURNER.

Proving the Food Value of Honey

My sister's little girl is two years old. She eats honey before, at, and after meals. She calls it honey pie. She is as strong and healthy as any baby in Iron County. She will walk from flower to flower trying to catch the bees. If one stings her she will cry for a few minutes, then try to catch another one.



A youthful but convincing honey "saleslady."

When GLEANINGS comes to the house we have to let her look at every picture before she is satisfied. People ask what we give her to make her so strong and healthy. We answer: "Plenty of pure air, sunshine, and all the honey she wants and when she wants it." Then we sell a ton of honey for some other baby. She is not only our honey girl, but she is our sales lady.

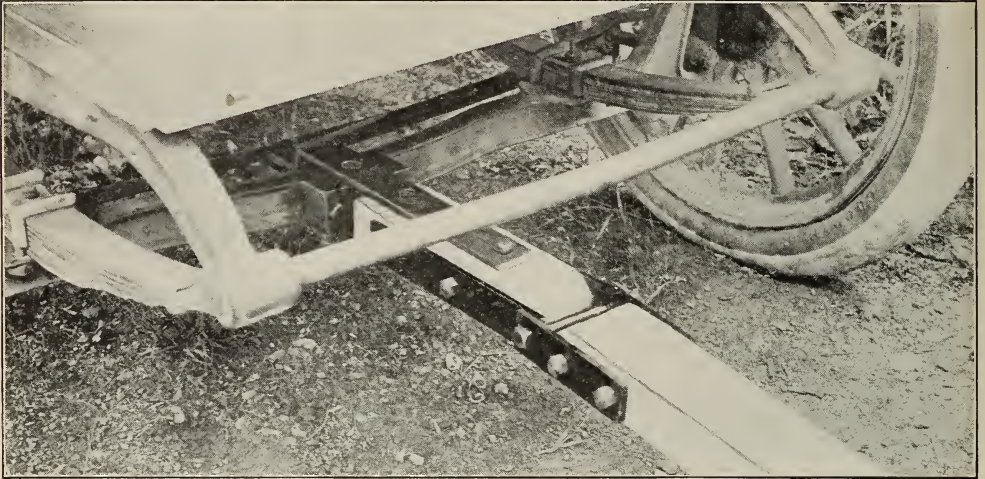
M. L. & E. F. SKEUGARD.

Parowan, Utah.

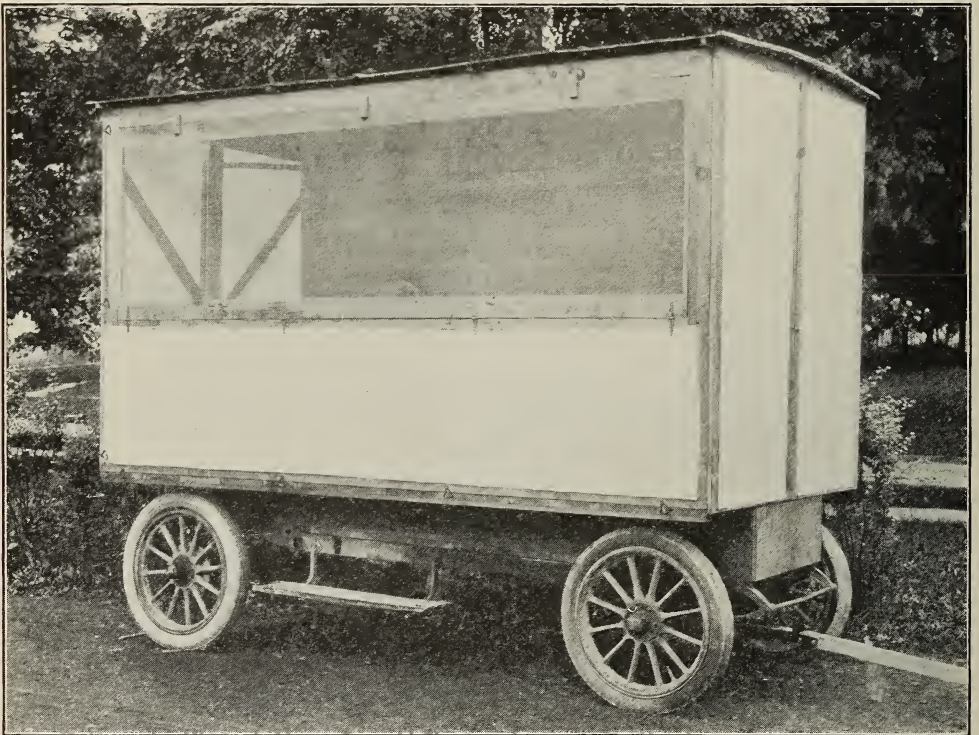
My idea is to have bees in excellent condition, and of course the flora is necessary for a good crop. In this section (South-west Missouri) we are going to ask 20 cents for comb and 15 cents a pound for extracted.

CLAUDE BARKER.

Avilla, Mo.



The chief problem in converting an old car into a serviceable trailer is to make it "track" the car ahead that is pulling it. The heavy steel straps bolted to the "tongue" are extended back of the axle, and there connected with one of the steering-arms by two more steel straps. The length of the two "arms" must be the same, of course.



Canvas extracting-room built over an old touring-car converted into a trailer. There are two floors made of 1 1/2-inch lumber, the lower one just the size of the frame of the chassis, and the upper one, twelve inches higher, is six feet wide. The space between which may be used for carrying supers, supplies, etc., is closed at both ends by a hinged door.

The framework above the floor is in sections, which, being held together by Van Deusen hive clamps, can be quickly taken apart and stored away when the trailer is wanted for other purposes.

EXTRACTING ON A TRAILER

A Sectional Canvas Building on an Auto Trailer, Large Enough to Hold a Complete Extracting-Outfit

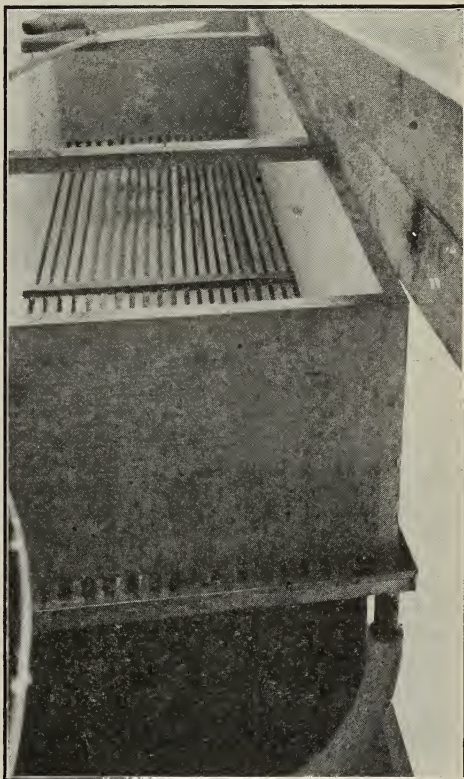
By H. H. Root

UP to last year we did all of our extracting at a central plant here in Medina, hauling the full combs in and the empty combs back again to the five or six apiaries. This year we conceived the idea of a portable extracting-house. An old touring-car that had long since passed its days of usefulness was available, so we decided to build a trailer and erect thereon a sectional canvas building in which to do the extracting.

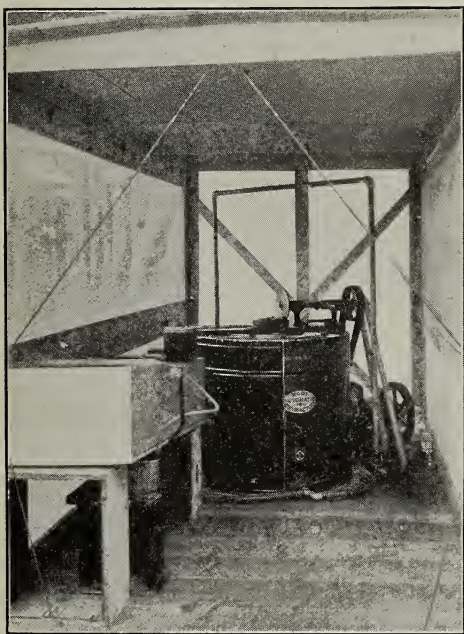
The platform we constructed of $1\frac{1}{2}$ -inch lumber. On account of the fact that it was necessary to go beyond the wheels to get the necessary width we decided to make two floors, the lower one 33 inches wide resting directly on the channel frame of the machine, and the wide floor 12 inches above it. The two floors were nailed firmly to 2×12 sills, the back ends of which were cut away to conform to the curve of the chassis frame. This platform we bolted firmly to the chassis with $\frac{1}{2}$ -inch iron rods, the lower ends of which were bent to hook around the lower edge of the frame. The upper ends extended up thru the upper floor, where

they were cut off flush with the floor. Nuts turned down solid made the platform absolutely rigid. The space between the two floors is

12 inches deep at the front end (tho not quite so deep at the rear), about 30 inches wide and 12 feet long, giving plenty of room for carrying supers, supplies, tools, etc. At each end is a hinged door.



The capping-box is merely a long box a foot high and about nineteen inches wide, with a slatted bottom. This stands in a shallow galvanized tray, in the lowest corner of which is soldered a tube for the hose connection to the pump. The same pump, therefore, drains the extractor and capping-box. No attempt is made to melt the cappings, for the box is quite large enough to hold the accumulation of a whole day.



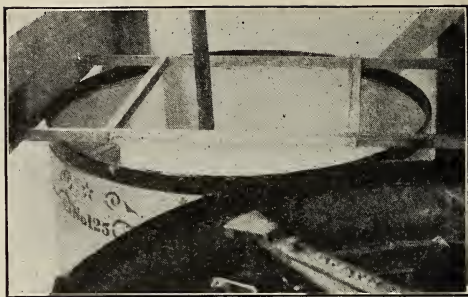
Interior of the extracting-room on wheels. The capping-box stands near the front on the left. The empty space at the right is for the full and empty supers. Back of the eight-frame extractor are the engine, clarifying-tank, water-can, etc.

The room on top is made in six parts, consisting of the two sides, the rear, the roof, and the two canvas-covered doors at the front end. The upper part of each side, as shown, is made of heavy galvanized screen 36 inches wide, with canvas 30 inches wide covering the lower part. The screens are tacked to a separate frame, hinged in

the middle, so as to permit swinging open at the top at any time it becomes necessary to free the building of bees. The rear end is a solid framework covered with canvas. The roof is made of thin lumber, $\frac{1}{4}$ inch, nailed on to four cross-pieces, which are a little higher in the middle than at the outer ends, and roofing paper tacked on to make it water-proof. The front end is closed by two canvas doors. In case of rain there is a canvas curtain on each side that can be rolled inside the screen, thus keeping the interior dry.

The room inside is 6 ft. 4 in., in the clear, from the floor to the roof. The different parts of the building being held together by Van Deusen hive-clamps, the whole structure can be very quickly taken off when the trailer is needed for other purposes.

Such an extracting outfit is not expensive. An old touring-car ready for the scrap heap can be purchased for \$50.00 to \$100, depending on the condition of the tires. We used 162 feet of lumber in making the platform, 64 feet for the framework of the walls and roof, 30 yards of canvas, and 8 yards of heavy galvanized screen.



Gravity method of clarifying. A large cheese-cloth bag is supported in the tank. No honey is drawn off into cans until the tank is full, and then no faster than it is pumped in. All bits of cappings float to the surface of the bag, hence the cheese-cloth does not clog up. A heavy wire hoop in the bottom of the bag overcomes any tendency of the cloth to float. The honey is drawn off into cans thru a funnel in the floor.

There are plenty of arguments in favor of the central extracting plant, and just as many, perhaps, for the portable plant. Up to this season we have had but little experience with the latter plan, but we are trying it this season. So far we are very well pleased.



THERE is a constant and steadily increasing complaint about the low price which the producer gets for his honey, and I contend that the producers are to blame. For that statement I shall doubtless be taken to task; but I am so sure that I am right that I repeat, it is the producers' own fault if they do not get a satisfactory price for their honey.

In making these statements I am speaking of general and usual conditions and not of exceptional conditions such as those caused by the present war, which has raised prices, or the accidental glutting of some market, which sends them down.

The generally accepted reasons given are over-production and under-consumption. The prescribed remedy has been to endeavor to increase consumption. Reducing production has seldom, if ever, been suggested, perhaps because of the improbability of getting the beekeepers to unite on such a plan. So each individual keeps merrily at the task of skinning the bees of the very last drop of honey and then feeding sugar to

QUALITY VS. QUANTITY

*Don't Extract the Last Drop and then
Feed Sugar; Sell Only the Best and
thus Secure the Highest Price*

By Arthur C. Miller

take its place. I hope to show that this baneful practice is one of the greatest of several causes of under-consumption and low prices.

It comes about in this way: The beekeeper having by precept and example been taught to work for large per-colony yield, tries to secure every possible drop of honey—good, indifferent, and poor; the good because it sells well, the indifferent because it also sells, tho for a little less, and the poor because he has been taught that such honey is bad for the bees and can be sold for something. Some poor honey may be bad for the bees, but I question if it is often the cause of harm to them. I do know that I have had just as successful wintering on some blends of poor honey and honey-dew as I have had on the best honey or on sugar stores. Much honey which the beekeeper considers poor in a merchandise sense is perfectly good so far as the welfare of the bees is concerned.

It is the poor and indifferent honey which is at the bottom of under-consumption and low price. In his personal or local trade

the producer puts forward his best; to a somewhat regular trade, in a wholesale way, he sells his indifferent grade, and the poor goes to whoever will pay something for it. Now be it known, those indifferent and poor honeys, because they are cheap, find their way into the hands of a certain class of bottlers who proceed to blend them with suitable honeys, and shortly the poor honey emerges, somewhat improved in looks, but seldom any better in flavor, and comes on to the market to compete with the "good." These bottlers are hustlers and their wares are to be found in the hands of most wholesale grocers and on the shelves of a vast army of retailers. The prices are attractive because they give a good margin of profit to both the wholesaler and the retailer. The goods reach the consumer at a price not much below what he would have to pay for a really nice article, and often far above what the producer sells his good honey for to his home trade. He has unwittingly put his poor honey in direct competition with his good. But the evil stops not there. The majority of purchasers consider carefully the amount of their expenditures, and the few pennies lower price of the inferior article often decides their selection and the poor honey goes on to their table. Even tho they do not know good honey from poor, the result is pretty much the same, for they do not eat as freely of the poor as they would of the good; and if perchance they have known good honey, they abandon in disgust the bottled honeys of commerce and turn to other sweets. The poor and indifferent honey of the producer has operated to bring about under-consumption. It would have been far better if the poor honey had been left in the hives for the bees.

Even if all beekeepers could be made to see that, and then try to live up to it, the trouble would not cease, because so many producers do not know when honey is "poor" in a commercial sense.

I know of not a few fine-colored, heavy-bodied honeys, totally unfit for table trade. One may be acid, another peppery, another with some peculiar or repellent flavor, and so on. Now, the producer may become so accustomed to one or another of these that he really likes it and believes it a fine article. Living in some place more or less distant from trade centers, he seldom has the opportunity to sample different honeys or compare them with his own. Even those beekeepers who frequently visit the markets seldom try any of the honey on sale. They look at the style of the package and the label, and perhaps ask a price here and

there, but do not buy and sample it. I seldom see a new brand in the cities in which my honey sells but I try some, and I keep track of how it takes with the consumers. So I know what I am talking about when I tell you of the poor honey and its travels. And when I say all producers would be better off if more of the "off" grades of honey were left with the bees, and less sugar bought and fed, I am not speaking idly.

Right here I want to call attention to an editorial in the January GLEANINGS, page 10, top of first column. It says: "As a matter of fact, however, every large producer has a certain amount of dark honey not quite up to grade." Then follows something on imperfect comb honey, and advice to sell both these commodities to transient trade. How in the name of reason the editor could make such a suggestion I cannot conceive. If there is one place above all others where a beekeeper's products should be of the best it is at his door, and the passing stranger is the very one whose palate should be tickled and eye pleased with the nicest honey possible. They scatter over the land, and it makes a vast difference to us whether they speak well or ill of us and our goods.

I have yet to see any dark or below-grade honey bearing the label of the Editor's company; and if they won't peddle it, certainly the producers should not.

As expressed, the editorial quoted is positively mischievous advice, and I sincerely hope it will be promptly corrected. It is not pleasant to take back water, but I believe the Editor is big enough to do it.

The beekeeping world does not look on New England as a whole as cutting much figure in honey production, and this particular corner is considered about as poor a pasture as any part of it. However, we have a very diversified flora, and no small part of it honey-producing. We get here several different flows of "surplus" proportions. A few localities give as many as four or even five periods of some surplus production, others only two. Most of the territory where beekeeping is worth while at all gives a more or less continuous yield, sufficient to keep the colonies in fair shape. These conditions are not peculiar to this region but are found over a wide area, only they are not always appreciated. On the other hand we have years of very low yields, or almost total failure, the same as other places do. With that statement of conditions, which are not so radically different from Mr. Crane's country (I spent quite a bit of my boyhood in northern Vermont),

I will tell just what I do to lessen the need of sugar-feeding and to carry out the advice I have given.

We have here several honeys which are very pleasant to some persons, but repellent to others. Some are of fine body and color, but so pronounced in flavor that one quickly tires of them. Several of these make up no small part of some of our "surplus-producing" flows. Once all were taken and put together, the aim being to get the largest possible yield. Some years the honey sold readily, "repeat orders" quickly exhausting the supply. Other years it was almost impossible to give the honey away, owing to the preponderance of poor honey in the mixture. Afterward the various flows were kept separate, so far as possible, and each kind sold by itself; but this caused trouble, for customers wanted the kind they had before, and you were out of it, perhaps, or forgot what kind they had. Following this was an attempt at blending, and it was a long and troublesome job. Some honeys would not do at all. Others were all right if only a little of them were used; and it was right at that point that I decided I could far better afford to take a small per-colony yield and leave the undesirable honeys with the bees, rather than to take everything and attempt to sell it and feed sugar.

The next thing in the evolution of my beekeeping methods was to learn thoroly the honey sources about each apiary and work for the surplus from the most desirable, just as the "clover-district" men bend every energy to get that crop. This was not as simple as it sounds, for flows overlap, and not infrequently some previously quiet and well-behaved plant becomes obstreperous and bursts into a sea of bloom and raises havoc with our plans, or gives us an additional flow of a desirable honey. But on the whole the practice is working satisfactorily. The bees are manipulated for the desirable honeys, and are allowed to keep the undesired sorts. Sometimes the latter are taken away in brood-sized combs, or are extracted and returned later, either for brood-rearing or for winter stores. It will be noticed that I am speaking almost wholly of extracted honey. This is not a good comb-honey region, but I do secure comb honey from one flow and occasionally from a second. When I do get it, it sells for a fancy price, so even a small per-colony yield in pounds brings a good per-colony cash return. Just keep the cash returns in your mind's eye and think less of the pounds per colony.

Neither Mr. Crane (page 48, January) nor any other beekeeper will adopt my

plan, nor even think favorably of it, until they change their ideals from quantity to quality and do it so thoroly that they will err on the side of leaving some possibly good honey with the bees.

You ask, "Does it pay?" That is the yardstick by which we do most of our measuring. Yes, it does pay. Suppose our average has been 50 pounds per colony, and we fed 10 pounds of sugar, and our honey sold for some medium price or for as much as the neighbors got. Now suppose we drop the yield to 40 pounds, feed nothing, and sell our honey for 20 per cent more than the highest-priced honey on the market, and have to keep putting out new yards to meet the demand. That is me. Now who wins? Providence, R. I.

[Perhaps we do not get your viewpoint; but we see no reason why we should "back water." It would be folly to sell these dark honeys along with other good honey to a distant market that does not know the producer. These off grades can be sold around home for less money; and then if an explanation is made that they are pure there is no harm done. Some people prefer these dark, strong-flavored honeys to the light-colored milder-flavored honeys. Around home one can pick out these kinds of customers. There are many people, foreign bred, who actually prefer these dark honeys. See bottom of page 135, second column, February GLEANINGS.—ED.]



The First Man Set the Price Too Low

There is not very much honey produced or sold in this section. The price on comb honey in the surrounding towns ranges anywhere from 15 to 30 cents. In my home town the price is from 15 to 20 cents. We could get more, but one producer started early in the season to sell at 15 cents and that kept the price down.

Extracted sells at about 15 cents. There is some chunk honey sold also that retails from 12½ to 18 cents. If the beekeepers would only come together and establish a price it would be much better for all.

I started last year with 17 colonies. I now have 43 and have made about 1000 pounds of surplus. The season is very short here, lasting only from May 1st until about the 20th of June, then we have a small flow in the fall. The flow in the spring is from tupelo and poplar, holly, and persimmon. They all blossom near together and the bees store very rapidly.

Waverly, Va.

J. A. BRYANT.



Conversations with Doolittle

"I am anxious to procure the best bees possible for the production of honey. I care nothing for color, very little for stings, but I do want a large quantity of honey which I can sell for cash. Of course the bees should be good winterers, otherwise they would not get strong enough for the harvest. My main dependence for surplus comes from the clovers and basswood, with a small surplus from fall flowers, occasional years. Now, from your forty odd years' experience, tell us just the bees which will be best for me to keep in my locality."

Our questioner tells us little as to his wants except *quantity* along the honey line. For this reason we shall have to guess somewhat. From my standpoint, a true solution depends upon which kind of honey we are producing—section or extracted. If I were producing extracted honey altogether I think I would select the darker Italians, or those from queens reared two or three generations away from mothers imported direct from Italy, allowing the young queens reared to mate with whatever drones there were about the apiary, whether from Italian, hybrid, or black stock.

If I were working for comb honey in sections exclusively, then I would procure a good queen from some best stock of the orange, or what is termed golden variety of the Italian bee, rearing all queens from her, and, as before, allowing them to mate with any drones they may chance to meet, since our questioner cares "very little for stings." Some of these young queens, either from the dark or orange variety of Italians, would doubtless give quiet and peaceable workers; but the majority of such promiscuously mated queens would give bees which a beginner would rather avoid. Nevertheless, if quantity and cash are what we are after, such direct crossing generally gives the greatest vigor. All my experience goes to prove that thorobred orange-golden Italian queens, mated to drones of either black or hybrid stock, give bees equal to the very best for section-honey purposes. I should prefer not to have these queens meet drones from young queens reared from imported mothers, for the reason that, as a rule, workers having much imported blood in them do not cap their honey nearly so nice, white, and captivating to the eye as do those having more of the golden, hybrid, or black blood.

The beekeeper who regards color as an index to quantity and cash in honey production is quite liable to disappointment, no matter what that color line may depend upon. Careful selection and breeding along any line of bands or stripes will doubtless bring some improvement; but nature has so ordained that, when queens are reared under the most favorable circumstances which go toward bringing forth the very *best queens physically*, the controlling of the drones with which these best queens shall mate is almost beyond our reach. Drone control, so far, is almost beyond the best of us; and when we can come the nearest to our ideal, much feeding and rearing out of season tends toward, not the best, but toward only a physically weakened queen. Therefore, the object of beekeeping being the quantity and cash from either section or extracted honey, the honey-gathering qualities of the bees employed is the paramount requisite.

To sum up I would say, first have the queens mate with drones as distantly related to the queens as possible; second, use queens quite closely related to imported Italian stock, where working for extracted honey, for there are no bees in the world, in my opinion, that excel those one or two generations from imported stock for honey-gathering. Third, where white capping of the combs in sections becomes one of the great objects to work for, then choose the orange-golden Italians.

But I hear some one saying, "If no bees in the world excel those a generation or two removed from imported stock as to honey-gathering, and the golden Italians possess the desirable trait of superior work in capping their honey, while they are in no way second as to honey-gathering qualities to those you recommend for the production of extracted honey, why use the darker bees at all, as there can be no objection to the whiteness of cappings in the case of extracted honey?" As this is along the line of what one of our best apiarists said to me only a short time ago it may be well to look into the matter a little. I am well convinced that the dark and golden Italians, other things being equal, will gather equal amounts of nectar from the same field, but the dark variety will give the greater amount of extracted honey. I think I can give the reason for it. Have we not been



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taught all these years, from blind Huber's time, that it takes twenty pounds of honey to produce one pound of wax, as Huber ascertained thru his experiments? While the beekeepers of this twentieth century are inclined to modify these figures a little, yet all close observers know it does take honey to produce wax, on the same principle that it takes corn to produce lard. Now, the white capping of combs takes much more wax than that transparent capping the dark Italians use, where the combs in sections look so watery and uninviting; hence the extra honey used for the wax, where we have the white capping, is saved for storing by the darker bees which do not use half the wax in sealing over their combs.

Borodino, N. Y. G. M. DOOLITTLE.



Letters from a Beekeeper's Wife

On the farm, Aug. 1, '17.

Dear Sis:

Hurrah! Only a week to wait before we see you! It seems too good to be true; but really, if you do not come soon, Billy will surely burst with impatience.

I am so glad that the strenuous days of honey-flow are over before your visit—now we'll all have more time to enjoy it. I have had comparative leisure for the past two weeks, but Rob has been concerned about his bees and has been going over every colony in all the yards looking for disease. He found a couple of colonies in June that he suspected were foulbroody, but we were too busy then to do much about it. He wrote right away for the bee inspector to diagnose the case, and he arrived several days ago. I never was more amazed when a young fellow of college age drove into the yard and announced that he had come to inspect the bees. I had expected a man of years, whiskers, and experience! I watched Rob carefully from the tail of my eye, but he showed no sign of surprise and was very cordial and withal respectful to the youngster, who couldn't have been any older than Harriette. Rob and Mr. Tait, the inspector, went off to the yard, and when they came back I realized immediately from their interested conversation that I was all wrong to turn up my nose because of the inspector's youth. He had evidently had a good deal of experience with brood diseases in a college laboratory and also among beekeepers, and he knew what he was talking about. Rob's interest

and respect deepened as it always does before a college education. Poor dear! he will never cease regretting that he couldn't have it, and he never seems to realize that he is twice as well educated as many college graduates that I've known. "No," he says, "they have absorbed something from the college atmosphere that I can never have." If all that "atmosphere" were wholesome, the case might be against Rob.

Mr. Tait proved to have a keen mind and gave Rob lots to think over this winter—problems that they were working on at his college. One problem that interested me and that I should love to work out was whether bees are most attracted by the odor or the color of flowers. He found, alas! that we have an infectious disease in our Haymaker yard—European foulbrood. It's as bad as whooping cough for children, and unless measures are taken to prevent its spread it will go thru a whole apiary. It won't go thru ours, for Rob is being extremely thoro, altho we have very good Italian stock in our yards. He has just ordered enough good resistant Italian queens to put one in each diseased colony and thinks that he will requenee all the apiaries next spring. He just brought in the queens from the diseased colonies to show Billy before he guillotines them.

Mr. Tait has been inspecting for several days now in our neighborhood and seems to be making our house his headquarters. He and the girls find a great deal to say to each other; and, altho I like him very much, I'll breathe easier when he goes. I suppose no mother is ever ready to have her girls grow up to the young-man-caller stage.

Poor boy! he has had his troubles with one farmer here. Isn't it strange that some people resent offers of help, even from the State? Rob has been specially anxious about this farmer's bees for he thinks that apiary is the source of infection around here. Several times he has offered his services but the farmer has always refused to let him go over the colonies, and has told him he knows that this foulbrood is only a scare. When Mr. Tait came Rob urged him to go over there first of all and he did, but the suspicious old fellow ordered him off the place with a shot-gun and said he wouldn't have any "young cub" look at his bees and tell him what to do. Instead of leaving, that tactful and brave youth engaged Mr. Spaulding in conversation concerning bees, entirely ignoring the shot-gun. I think the old fellow must have admired the boy's



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courage—at any rate, after half an hour's talk he actually invited him in to look over his colonies to see whether there was disease present! I never saw Rob so pleased over anything—every few minutes he chuckles to himself and I know he is thinking how Mr. Tait got around crusty Mr. Spaulding. Tomorrow Rob and the inspector are to spend the day treating the Spaulding apiary.

Billy considers Mr. Tait a hero, and the girls talk of nothing but his victory. I wouldn't mind a change of subject myself, and shall be delighted when you come to create a diversion. Of course that isn't the only reason I am so impatient to see you!

As ever,

Mary.



My Last Year's Experience in Beekeeping

After enjoying and financially profiting by a year's reading of GLEANINGS it seems a duty to give a little of my experience, hoping that it may be of benefit to others. I am drawing near my "Forty Years Among the Bees," and if I had the faculty of observation and the facility of expression possessed by the venerable C. C. M. or the alert and versatile Arthur C. Miller, the rather unique experience of caring for about 20 permanent apiaries, some of which are more than 50 miles apart, would doubtless make interesting reading.

Altho located in a section where great profits can never be expected, I have found the returns very satisfactory, the work pleasant, and the acquaintances formed, most delightful and inspiring. The constant study involved has kept me younger, as it unfolded a new world in the study of botany and biology. Even the unwelcome advent of disease gave a chance for a little work in elementary bacteriology, stimulating to more intelligent work; and, altho there was a temporary loss, still my best record last year was from a yard that had suffered quite seriously a year before.

So it is with pleasure that I report the past season as the best in this locality for six years. For this there were two reasons—the excellent work of Dr. Gates, State Inspector, who by his courteous and tactful methods has placed beekeeping on a higher and safer level and also the fact that constant rains prevented about half of the

usual spraying. Now do not think that I condemn *all* spraying—I use a small outfit myself; but the fact remains that less spraying this year resulted in considerably less defoliation.

In all my work I saw but one bad case of poisoning. I had five colonies that were exceedingly strong and entering the supers; but a week later I found them so reduced that, even if united, they would scarcely have formed a swarm. My first thought was, "Bad case of European foul brood"—"sac brood too." Then, "Where could the adults have all gone?" A careful examination of the frames showed dead brood enough for any or all diseases—too much, in fact, for European foul brood, if one considered the age and placing of the diseased brood. The sac was evident enough; but in sac brood we expect from 2 to 40 per cent of diseased brood. Then I noted that the bald brood, while abundant, appeared to show an absence of nurses rather than a change of quality. There was absolutely nothing diagnostic except the sac brood; and as it was the wrong time of year for spraying I was completely puzzled until I called the gardener and learned that immediately after every rain a power sprayer had been used in the hard-wood forest. For some reason this forest spraying had proven nearly as bad for the bees as spraying during fruit bloom. At first the outlook seemed rather dark; but I finally succeeded in building up four colonies and even secured some comb honey in the fall.

A honey crop will always sell, and, if kept, there is practically no shrinkage or deterioration; also that, for the capital invested, no other stock than bees yields quite as high a per cent profit.

Rowley, Mass.

GEORGE W. ADAMS.



Sunday Selling

In "Stray Straws," March, I notice that Dr. C. C. Miller regrets that Sunday is often the best day for roadside marketing of honey. My grandson, Robinson Newcomb, has a sign on the roadside, and it reads like this:

"Honey for Sale. Sound Sparton. No Sale on Sunday."

He can sell honey six days in the week, and still remember the sabbath day to keep it holy.

Cleveland, Ohio. SUSAN R. NEWCOMB.



FROM THE FIELD OF EXPERIENCE



Swarm Prepares, Issues, and Travels to New Home

A continuation on Swarming from page 530 July number

The swarming impulse having arisen, the colony immediately begins its plans for leaving. This preparation does not, as many suppose, consist merely in the completion of the queen-cells, but there are other matters also that must receive the attention of the bees. It is of vital importance that, after entering the new abode, the bees shall be able to begin comb-building immediately. So while an apparent state of idleness has prevailed for a number of days, the workers have in reality been engaged in secreting wax scales to meet the immediate demands of the new work.

The day for swarming arrives. There is a certain laxity in the gathering force, altho some field bees are still at work bringing in pollen and honey. Inside the hive there is an unusual commotion. Even those loaded with pollen are rushing about in great excitement. The majority of those that are to leave with the swarm are either gorged with honey or they are just loading up; for after leaving there will be great need of this honey, not only for food but also for secreting wax scales for building their new comb. A few bees, however, do not take up this burden, as they are reserved for defense work and scouting purposes.

Usually, the swarm alights before leaving the vicinity of the hive. It will be noticed that the bees on the outside of the cluster are not loaded; these comprise the defensive force of the swarm. No sooner is the cluster completed than preparations begin for the second move, which may or may not be the final one.

Often the new swarm has selected their future home before leaving the old one, but I believe this is not the rule. In one case I followed a swarm that had no home located, and they traveled a distance of two miles before alighting. Again, I followed one for half a mile and watched them enter the new home without having clustered or hardly checked their mad rush from the parent hive to the tree that they entered. Usually we may expect them to alight before leaving, and send out scouts in search of the new abode, if it has not already been selected. If they leave within an hour, they probably have already chosen their quarters. If not leaving for several hours or even a day, it is quite likely that their home has not yet been located.

I have had a peculiarly good chance to observe this matter; for, when a boy, I often knew them to come three miles across the Kaw River Valley into the heavier wooded section on our side. In every case that I observed, in which this distance was traveled, there was no home decided upon until they had alighted and the scouting force had made their report. As a rule the new location is not selected at an excessive distance from the clustered swarm. In case the new home is not chosen within a reasonable time, the swarm will make the second, third, and even the fourth flight before getting located, sending out scouts from each stop to search for quarters. Invariably, at the last clustering-place there may be found a few scouts which returned after the swarm moved on; and as long as they live, these bees will remain in that locality, true to the trust left them. The process of wax production continues during the delay in searching for quarters, so that many scales are lost; and when the swarm has moved on, small bits of comb will be found attached to the clustering-place. In searching for a home there is no certainty that a swarm will continue in the same direction of flight, for I believe that I have had swarms that left me return in a few days to decoy other bees from the same yard. If much time elapses before a place is found, the bees use up the honey in their sacs, become more active, and fly higher and further. They also are quite cross from the fact that they have nothing to do but guard work.

We will now suppose that the scouts have reported favorably concerning their new home. Shortly others will appear on the scene, and still others, until it may seem that the swarm has already moved in. This may continue for several days before their actual coming, tho the hand of man may divert them even now into other quarters. Still they often refuse the place man offers them, in favor of the spot of their own choice. Immediately before they move in, there is always a lull in the activity of the bees around their prospective home. This is due to the fact that the scouts have returned to escort the swarm.

They come at last and lose no time in establishing their quarters. The wax scales that have been prepared are utilized in the immediate construction of comb. The field force, in a very few minutes, is out after nectar; and the greatest activity prevails, all work now centering on the gathering of nectar and the building of comb. When



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the comb is sufficiently drawn, the queen begins her work and soon there are new larvæ to nurse as a part of the hive work.

By the ability to select, man has a wonderful advantage over nature, in that he may accomplish in a short time results that might require centuries to accomplish by chance crossing or by the law of the survival of the fittest. By selecting colonies that are the least inclined to swarm, and that are the best honey-gatherers, it is possible to advance the usefulness of the bees, within a comparatively few years, further than they have ever advanced in that line before. It can not be reasonably expected, however, that the inclination for swarming will ever be entirely overcome.

Redlands, Cal. P. C. CHADWICK.



A Queen-breeder who has Made Good

It was about 1878 that my father made his start in the bee business. I was only seven, but I remember something of the time he had in making his first transfer from an old box hive to what was then termed a patent one, and also how his first

Italian queen was killed in transferring. With the second queen he was more fortunate; and noting from GLEANINGS that a few queens were wanted at the home of the honeybee, he attempted to fill the order. This first effort was a complete failure, as most of the queens died in transit. The second lot fared better and were accorded the highest praise—an order for more of the same kind.

This first check for queens spelled opportunity, and it was immediately decided that all of the bee-money should be set aside as an educational fund; for with his own studies cut short by his response to his country's call he had longed—yea, prayed—that his children might not be deprived of that which he so greatly missed. The results of this fund were most gratifying, for by its means eight children have received either a business or a college training. We sometimes lightly remark that we had our education stung into us.

As his helper in the apiary I soon learned that his ideal was to raise the very best queens; and the thousands of queens he sent out from Coronaca, S. C., bespeak his success in queen-rearing. It is a singular



J. D. Fooshe and wife, Augusta, Ga., who celebrated their golden-wedding anniversary last December.

FROM THE FIELD OF EXPERIENCE

fact that his name never appeared in the advertising columns of any bee journal. The few connections he made during the first years took his entire output. "Old customers first" was his fixed policy; and even to this day he will drive several blocks out of his way to serve a former patron.

With mother's aid he helped solve the problem of a suitable candy for mailing queens. Later he contributed his part to the perfecting of plans for artificial cells, tho of late years he has preferred to use drone comb for this purpose. Indeed, it is hardly too much to say that he has been right at the front in every advance movement with bees, either of his own accord or thru the call of GLEANINGS to try out this or that.

Being a true naturalist, his close communion with nature has brought him into a closer relation with God. So vital has been my mother's interest in his work and experiments that I have never been able to draw the line between what he did of himself and what came by way of suggestion from her. Their union has been most complete, and they have taken God into all their plans. This is why their golden wedding (Dec. 30, 1916) will always linger as such a precious memory.

Augusta, Ga.

FRANK FOOSHE.

Good Things for Beekeepers at the Massachusetts Agricultural College

The beekeepers' section at Farmers' Week at the Massachusetts Agricultural College, Amherst, was well attended by beekeepers from all parts of the state, and proved most profitable and interesting.

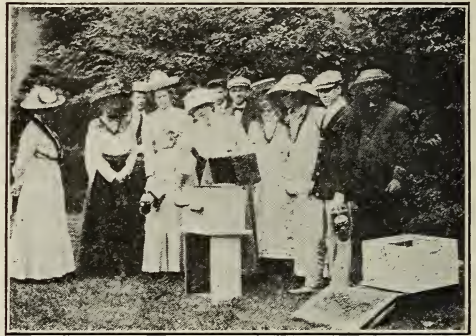
The apicultural work at the college has been raised to a very high level by Dr. Burton N. Gates, Associate Professor of Beekeeping. The building is of concrete, and is well equipped with bee-cellar, wax-rendering outfit, honey-extractors, etc. The museum, which probably has no equal in the country, contains among other interesting things several original hives used by the pioneers of American beekeeping, such as Langstroth, Dadant, and Quinby, also an interesting collection of straw skeps, some of which came from over the water. For those of literary inclinations the splendid private library of Dr. Gates in the Entomology Building was available. This library contains many very old and rare beebooks—French, German, English, and Italian, as

well as the first editions of some of our early American writers on the subject.

The extracted-honey exhibit this year was especially fine. There were samples of many varieties—clover, of course; sumac, goldenrod, clethra, orange, sage, wild thyme, buckwheat, etc. There was some very nice granulated clover honey of a fine smooth grain.

Wax in all shades and shapes formed an attractive and interesting part of the exhibit.

The first lecture was on Tuesday morning, March 27, by Dr. Gates, followed by Mr. J. L. Byard, Superintendent of the Apiary, which lecture was primarily for beginners. Dr. Miller's bottom-board and the swarm-catcher in use at the College were demonstrated. The swarm-catcher consists of a box made of slats perforated with round holes, bound at both ends with tin and set on a pole lengthwise. It contains a frame of brood. The bees enter very readily thru the open end and the holes, and will remain permanently if desired.



A class in beekeeping at the beekeepers' section of Farmers' Week at the Massachusetts Agricultural College.

Tuesday afternoon Miss Shapleigh, of the Department of Foods and Cookery, Teachers' College, Columbia University, New York, demonstrated the uses of honey in a very able manner. Tho honey can not *always* be used in place of sugar she showed many ways in which it could be successfully substituted. During the afternoon she made muffins, cake, baked custards, boiled frosting, and sandwich filling, using honey in each. When cooking with honey half a teaspoonful of soda should be used to counteract the acidity of the honey.

The program Wednesday morning included lectures by Dr. Gates; Mr. G. P. Wood, of Peekskill, New York; P. W. Latham

FROM THE FIELD OF EXPERIENCE



The apicultural department of the Massachusetts Agricultural College.

(son of Allen Latham), and L. R. Smith, of Hadley. Dr. Gates spoke on comb and extracted honey production in Massachusetts, advocating the production of extracted as more natural to the floral conditions of this state, more economical and more profitable.

Mr. Latham presented some very interesting facts and figures which had been secured thru answers to inquiries received from 57 beekeepers thruout the country. This set of figures proved most conclusively to those present that Massachusetts is not producing nearly as much honey as she could and should. Especially is this true because the wholesale selling price for both comb and extracted honey is higher than in any other state, and the cost of production no greater. Massachusetts honey is mostly sold at retail. On account of lack of uniformity in packing, it is little in demand at wholesale. Mr. Latham is of the opinion that organizations should adopt trade labels and a certain standard in regard to quality of package.

Miss Dorothy Wright, of Lowell, a very intelligent and attractive woman, spoke very charmingly, emphasizing the desirability of scientific cleanliness in the preparation of honey for the market and the consideration of honey as not merely a substitute for sugar but a new (in the sense that heretofore it has not been in very general use) and delicious food.

Miss Josephine Morse, another Bay State beekeeper, told of a short course in bee-

keeping given by her last summer. This was followed by a demonstration of wax-rendering by Mr. Byard.

Thursday morning a joint session was held with the Hampshire, Hampden, and Franklin Beekeepers' Association. After the business meeting at which Pres. O. M. Smith, of Florence, and Sec.-Treas. B. N. Gates were re-elected, Mr. Smith gave an address on the packing and handling of honey, and showed a wax-extractor with which he produces a fancy wax with a minimum of labor. Dr. W. P. Brooks, Director of the College Experiment Station, told how to get a good flow of nectar. He gave much valuable information about the treatment of the soil for different crops.

The beekeepers' part of the program ended with a demonstration by Dr. Gates in the honey-extracting room.

JOSEPHINE MORSE.

So. Lancaster, Mass.



Breed from the Best Colony of the Best Strain

An aunt of mine who was quite a student of human nature, and a very successful physician, used to say that it is better to marry the poorest of a good family than the best of a poor family, even if the former is not so bright, as the children will stand a better chance of being bright. This corresponds somewhat to G. W. Phillips' idea of

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"soma plasm" and "germ plasm," page 27 of the January number.

To apply this to bees, say A has 100 colonies of a good strain of bees, 98 of them producing 300 pounds of honey each, and the other two producing 100 each, while B has a poorer strain of which, under the same conditions, 98 colonies produce 100 pounds each, and the other two 200 lbs. each. According to Dr. Fowler's idea it would be better to breed from the poorest of the good strain, altho they produced only 100 pounds each, than from the best of the poor strain that produced 200 lbs. each.

In the March number, page 223, there is a picture of a cow, "Sophie," and her calf. If Sophie had a poor calf that did not give quite as much milk as one of the best of an ordinary scrub stock, which would be the best to breed from—the poorest of the best or the best of the poor that seemed to be the better of the two?

Let us now consider heredity and environment as to gentleness. I have a hen and thirteen chickens (6 weeks). They are so gentle that when I weigh them once a week I can pick up every one and put them in a box without chasing after any. Is that heredity or environment—"soma plasm" or "germ plasm"? The same chickens raised differently might be very wild. So bees from a gentle strain can be made very gentle or very cross.

Again, we might tame a wolf much tamer than some dogs; but would not the young from the tame wolf be more apt to inherit wild tendencies than the young from the vicious dog that was made vicious by its environment?

I propose that, instead of breeding from the best swarm or from the best strain, we breed from the best swarm of the best strain and leave the scrubs alone, thus taking advantage of both heredity and environment.

Hammonton, N. J. C. E. FOWLER.

What Shall We Do With Them?

To my mind the greatest hindrance to establishing as well as raising the price on honey to keep pace with other table commodities is the so-called farmer beekeeper (and they don't all live on farms)—the man who a few years ago started with one colony, and with perhaps the increase of one colony he has more honey than he wants for home consumption. This surplus honey he gives to his children, neighbors, or

friends. Perhaps in another year he has more than he wants to dispose of in this way, and he thinks of selling some of his crop. He is a man who, if you offered him half a cent less than the market on his chickens, eggs, or butter would be highly insulted; but in case of his honey he does not recognize that it, too, has a market value, but seems suddenly to become conscience-stricken and dumps his honey on the market at half to two-thirds the market price. I saw as fine comb honey as any one could produce dumped on to a local grocer at ten cents a pound in trade. This was in an Ohio town where I lived for several years. At the same time I was getting twenty cents a pound at the house, or \$4.00 a case.

What shall we do to educate or eliminate the farmer or small beekeeper? We have them wherever I have been.

We have another class here, of larger producers, who sell the grocer all they can and then canvass the consumer, selling in small lots at the same price that they did the grocer, thus breaking the price and injuring the grocer who assisted him in handling his crop!

Wichita, Kan.

O. J. JONES.

Impossible to Keep to the Old Price

I run entirely for extracted honey and put it all up for market in 2-pound friction-top cans.

For the past ten years I have charged a uniform price of \$3.00 per dozen cans. Last year I paid a concern in Baltimore \$18.50 per 1000 for these cans. This year the same company asked me \$45.00 per 1000 for the same cans. I have now purchased from another large concern for \$37.75 per 1000. This price is more than double last year's price.

I shall raise my price to not less than \$3.60 per dozen cans. With the high prices now charged for all other foodstuffs, I expect to have little trouble to sell my output.

Factoryville, Pa.

EARL SEAMANS.

Some of our Short Cuts

We generally do our extracting during August. After this is over we stack the trays and supers of empty combs eight high, zigzagging the corners to let in plenty of light. Moths prefer darkness "because

FROM THE FIELD OF EXPERIENCE



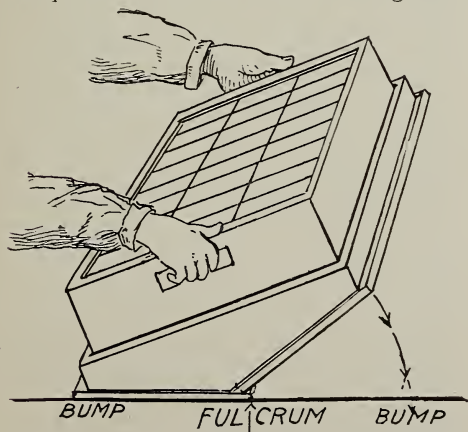
G. J. Yoder's Apiary, Meridian, Idaho.

their deeds are evil." We put a queen-excluder under each stack of supers to keep the mice out and another one on top to furnish shade from the sun. If it rains, additional protection is needed.

In November we store the supers under shelter for winter. So far we have always had them cleaned out nicely without any trouble from moths.

FREEING SUPERS OF BEES.

Years ago when Rambler described his "jouncer" (a small skeleton framework in which a super could be placed for jarring the bees out) we liked it so well that we have been following this method ever since. Last season we accidentally hit on a new way. On our hives we use gable covers. We put one of these covers on the ground



Yoder's way of "bumping" bees out of supers.

upside down, take off the super, brush the outside bees off, set it down into the cover, then rock the cover from side to side a quarter to half a minute. A little practice determines the time required, also how hard to bump the sides without breaking the combs out of the sections. After lifting the super out, emptying the cover of bees, we can repeat the operation if necessary.

ENEMIES OF BEES AND HONEY.

Last season in April, May, and June, the English sparrows invaded our apiary in the morning while it was cool and damp. They would get in front of the hives, pick up the bees, and then make for their nests in which were young birds. On examination we found their crops crammed full of bees and grain. In some of the birds fully three-fourths of the contents of the crop was bees. After the weather became warm enough so the bees could fly well, the sparrows left.

The yellow-jackets were very numerous last year, carrying away hundreds of pounds of honey. The pesky fellows were so smart that we could not avoid getting some of them into the shipping-cases where no doubt a few lived to the end of the journey. We found a number of their nests, and during the cold weather of November we dug them out of the ground about a foot below the surface. We found thousands of the insects, also thousands in the larval state. They build their comb horizontally, using only the under side for brood. The combs are fibrous like the nests of hornets.

Meridian, Idaho.

G. J. YODER.

"TWO mistakes are frequently made by the beginner in sweet-clover growing. One of them is to delay cutting too long, and the other is to cut too low. The first fault results in a coarse hay of poor quality; the second results in killing the plants and preventing a second crop. . . . This second crop is the more valuable of the two, as it is the one which is to produce seed." This is an interesting item, not only because of its valuable information, but because it appears, apparently as editorial, in so valuable a farm paper as *The Country Gentleman*, fully recognizing sweet clover as a forage plant, with no reference whatever to it as a honey-plant.

R. F. HOLTERMANN, your explanation, p. 526, how the bees, when left to clean up foul-broody combs, carry the disease on their bodies to all parts of the hive, shows clearly the danger. But when those same bees, after having the matter fully explained to them, go right on and clean up the combs without bad results, what are you going to do about it? Yes, you're right; the dead larvæ were all over my yard, and after a rain you'd see them swollen up on the entrance-boards, but somehow they didn't seem to get into the cells. I don't know how mild or how severe you'd call the European foul brood I had; but I do know that so long as it was left to its own course it was a vigorous traveler, and I am strong in the belief that no wide-awake bee-keeper should ever let the disease get any more of a start than it had with me. Now look here; the Tommies are so nice to the Sammies nowadays that I can't afford to have any rumpus with a Canuck like you; but "when this cruel war is over" I make no promise what I won't do to you.

It is surprising, as said on p. 511, to note what "pep" one or two frames of hatching brood will give to a medium colony. And yet not so very surprising when you do a little figuring. Suppose there is brood in a frame to the amount of 16 inches by 8. On both sides there are 56 cells to the square inch; 16 times 8 makes 128, and in 128 inches there are 7168 cells. So two frames would give more than 14,000 bees, and that's quite a colony. [The actual figures of the number of cells to a comb show that there would be at least three pounds of bees added to the colony. If it had two pounds already it would make about five pounds in

STRAY STRAWS

Dr. C. C. Miller

all. Such a colony we should consider of fair strength; but, of course, for real honey production we ought to have them much stronger than

this. Eight or nine pounds would not be too heavy; but in the production of extracted honey the five-pound colony will do very fair work, and a ten-pound better; but a few pounds would hardly amount to anything left by itself. The giving of hatching brood works nicely both ways. The colony that gave up the hatching brood would have swarmed prematurely, and the one to which the hatching brood was given is that much of a boost. In other words, it is put in a position where it can be an earner rather than a ing us how the thing came out.

THE GLEANINGS bunch has made a good deal of to-do about getting queens fertilized in a big greenhouse, and a good deal of space has been occupied in telling of the failure. Would it not be better to occupy that space with successes instead of failures? Well, it may or it may not be wise to make further experiments in the way of fertilization in confinement, but I am most emphatic in the belief that space is well occupied in telling of failures. If mistakes and failures were fully reported it would save some of the rest of us from repeating them. The truth is that we don't like to 'fess up when we've done some fool thing. So, thanks to the GLEANINGS bunch for telling us how the thing same out.

"ALL our honey is snow-white and of exquisite flavor. The most of the honey is from white sweet clover."—*Dr. E. A. Morgan*, p. 516. "The flavor of sweet-clover honey is so strong that it is not very popular in our markets."—*J. M. Buchanan*, p. 521. Now, what do you know about that? Is it the difference between South Dakota and Tennessee, or what? We don't have pure sweet-clover honey here; but we do have white-clover honey with a vanilla flavor, and I suppose that flavor comes from sweet clover. It's delicious, but I've always had an idea that too much of that flavor might not be so good. Let us have more light from any who have the simon-pure thing. [As a general rule the color of honey grows lighter as we go further north. For example, we find that white clover is a little lighter color in Ontario, Canada, northern Michigan, Minnesota, and Wisconsin than in the states directly south of the

Great Lakes. However, the honey of Tennessee we consider of very good quality; but according to the rule it should not be quite as bright as that of Ontario, Canada. If this rule applies at all it would affect sweet clover as well as alfalfa. It is well known that northern alfalfa is lighter in color than southern alfalfa in the irrigated regions. In fact, along the southern tier of states next to Mexico the alfalfa is on the amber order, while along further north it is what we call a light or white honey. It is possible that sweet clover is affected the same way, especially since it is a near relative.—Ed.]

ENGLISH authorities are still baffled in their search for the cause of the Isle of Wight disease. Sufficient evidence has not been found to convict *Nosema apis* as the culprit, and the latest pronouncement is that, "altho probably an infectious disease, it is one which requires the coincidence of other and presently unknown external factors (besides a specific organism) before the disease develops. The disease is not necessarily conveyed by mere contact with contaminated hives or combs, or by feeding on contaminated stores."—*British Bee Journal*, p. 169. [Dr. E. F. Phillips, of the Bureau of Entomology, has practically come to the same conclusion with regard to a disease in this country that is somewhat similar, and which may be the same thing, but which among our Italians, and in our climate, is by no means as serious as it is in Great Britain.—Ed.]

CREDITING to each colony the number of sections taken from it is easy, but not so easy to credit extracted honey. Weigh in a separate lot the extracting-combs taken from each colony, then weigh the empty combs after extracting, and you have a sure thing of it. But that's a lot of trouble, and hardly to be thought of. If you weigh an average comb that is filled and sealed, both before and after extracting, you will have a fair idea of the weight of honey a filled comb should contain. Weigh several and take the average. Then with a little practice you should be able to estimate and put in your book before leaving the hive the amount taken from each colony. Do you know any better way?

"AFTER white clover has been yielding for a week or ten days. . . the queen should be confined to the lower story. In this lower brood-chamber eight combs are selected . . . that contain the most eggs or the youngest brood," p. 519. Why? If the object be to prevent swarming by giving the queen full swing, as in the Demaree plan, then the nearer we come to

having no brood the better. And if all the brood in the comb will hatch out in a day or two, then we have much the same as empty comb. If all the cells are filled with eggs, then the queen will have nowhere to lay for the next 18 days. So I have always favored the ripest brood, if any, in the lower story. Yet Mr. Horner may have some reason for his procedure.

JUST when you think you know something for sure, some one knocks it all over. I said "every laying queen ends her career by being superseded by the bees." I thought I had said something pretty good. Along comes that man Chadwick, p. 547, suggesting that there's no supersedure when they die in winter. I wonder if that statement might be tinkered up after this fashion: "Every laying queen, provided her colony continues, ends up by being superseded." Now, P. C., do your worst.

"If a virgin or a queen-cell is given, the chances are nine to one that when the queen goes out to mate the bees will swarm out with her," p. 517. I'm not going to dispute that; I don't know. But I'd like to know. Instead of it being the rule, I had supposed it the exception for bees to accompany the queen on her wedding-trip. But the bees going with the queen doesn't matter, if they only return. The really important question is this: In what proportion of cases do the bees go out with the queen and *stay out* with her?

"HE THINKS the odor left on the tree by one swarm attracts another, and that the swarm odor in the yard excites bees from other colonies to swarm," says "Mary," p. 441. Likely enough he's right about the odor on the tree attracting a swarm; but isn't it more likely that the noise rather than the odor of a swarm excites swarming in other colonies?

J. FORD SEMPERS stops the desire to swarm by giving a spoonful of honey one to three times. If I had known that 40 years ago, it would have been worth a thousand dollars to me—if it would work. But I'm just a bit afraid that if any one else tries it, it will prove a dead failure.

"DURING the autumn of 1916, Mr. Stewart's 500 colonies were fed about two tons of honey," p. 528. That seems to show that so good a beekeeper as Charles E. Stewart thinks he can better afford to feed honey than sugar.

PROF. BALDWIN, many thanks for saying you were not successful in clipping a queen that was in full chase running over the comb, p. 546. I didn't want to think that I was the only one that couldn't do the trick.

ONE of the interesting things about reading GLEANINGS is the knowledge we acquire of different parts of our broad

country, until we come to know the climate and conditions north and south, east and west, almost as well as in the little corner we occupy.

On page 521, July, J. M. Buchanan speaks of lespedeza, or Japan clover. Will he tell us more about it? Is it hardy north of his state? And does it yield honey freely?

I like Prof. E. G. Baldwin's courage in not giving up, page 546, July. Many a poor season, or what appeared to be, has been turned into a good one by the pluck and grit of the beekeeper.

Some beekeepers appear to reason like a farmer some one was telling me about a few days ago. He said, "What is the use of raising a new pig every year when you can keep the old one until it is several years old?"

I confess to some disappointment as to the outlook for a good-sized crop of honey in this country this year, as I read over reports from different sections. One thing is certain: If the crop is light, prices must rule high; but I am not yet ready to give up.

"We have not done it," is the heading of the last chapter in the mating experiment of bees under glass. We can enter into the feelings of those conducting it, for we regarded it as belonging to every beekeeper, and we had fondly hoped it might prove a success.

It was a disappointment to us to learn that the fiber package does not stand shipment as was hoped. Would labeling "Glass, handle with care," be misbranding? There are those who claim it would not—that the word "glass" stands for fragile goods—a class that requires very careful handling.

On page 275 is a paragraph describing a honey-board we use, which Mr. Baldwin calls a "kink for keeping bottoms of sections clean." Not at all for keeping the

SIFTINGS

J. E. Crane

bottoms of sections clean, but for the more important work of keeping the faces of the combs clean. It keeps the bees from carrying

up bits of dirty wax from the brood-chamber, and mixing with the white wax of the new combs.

The announcement that there may be disease among the bees is, to many persons, like a clap of thunder out of a clear sky. "I never heard of it. I don't believe it. It is all a notion," is the reply I received from one where I went to inspect the last colony.

Dr. Miller inquires, page 532, July, "If eggs are carried on the bees, why not on Italians just as much as on blacks?" Doubtless they would be if there were as many to carry. But Italians keep the worms so well cleaned out that but few mature into moths to lay eggs to be carried into the hive by the bees.

That July cover picture showing the clover is just grand. Of all our northern clovers I believe alsike the most beautiful. I am inclined to think that, acre for acre, it yields the most honey, and I am quite sure it is the most fragrant. Its fragrance reminds us of "the smell of a field that the Lord hath blessed."

Bees appear to have bred up well here as in other parts of the country in spite of the cold cloudy April and May, and well we may put June in too, altho not so bad as the earlier months. I saw the white-clover blossoms first June 18 and now July 3, but little clover honey has been stored. Two years ago very little clover honey had been stored at this time, yet it turned out a good season.

Dr. Miller discusses the relative amount of comb and extracted honey a colony will produce—page 273. One difficulty is, we are apt to forget the amount left in hives that have been run for extracted honey. So far as our experience goes, colonies run for extracted honey are usually found much lighter in autumn than those run for comb honey. If the amount of winter stores were the same I believe the difference in amount of surplus from colonies run for extracted or comb honey would not be as great as generally believed.

Do you know, when I read of the never ending and futile arguments, debates, and speeches of the Senate I am filled with such feelings of indignation that I would never dare try to put them into words? Language adequate to the situation would inevitably send Our Food Page straight to the metaphorical woodshed and the company of M. A. O. Apparently it is quite all right for women to sacrifice everything that makes life worth living for this war. It does not matter that there are thousands of mothers whose hearts are breaking with fear and dread of what the war has in store for their boys—young wives whose husbands have gone, girls who have bidden their sweethearts goodbye, for how long? perhaps forever. But it would never do to deprive the drinking man of his beer. He is accustomed to it as part of his daily diet. So are we housekeepers accustomed to serve wheat in some form three times a day to our families, but we are obediently substituting at least three wheatless meals a week in the interests of food conservation. We are also learning to use less meat and do without many other things to which we have long been accustomed, and we make these small sacrifices gladly. But we think it only fair for the beer-drinkers to give up their beer and thus release 70,505,488 bushels of valuable grains (the brewers' own figures) for food purposes. And, as Dr. Wiley points out, "It would not be a sacrifice at all, but a blessing, and not even in disguise."

Isn't it a pity that those senators who, for weeks, have blocked the efforts of our president to have the food-control bill passed, and were willing to have the manufacture of beer continued, could not be set to making war gardens, running windmills, or some other useful work? Also I should love to set those misguided suffragists, who have been annoying our overburdened president and hurting the cause of equal suffrage by picketing the White House, to work in a kitchen, canning fruits and vegetables. Such energy and endurance should not be wasted.

A DRY SUBJECT.

How are your war gardens getting along? Have you canned any of your surplus vegetables or fruit yet? This month I am going to devote a part of my space to a dry talk. You may think I have done so in two senses of the word already, but now I mean a food-



drying talk. The Department of Agriculture is urging housekeepers to dry a part of the surplus instead of canning it.

There are several good reasons for this. In the first place, it is going to be difficult to get enough cans, either glass or tin, before the season is over; dried foods are fully equal to canned foods in nutriment; many people consider them equal or even superior in flavor; they require less time to prepare; they take up less storage space, and they can be stored in receptacles which would not answer for canned foods.

For years dried corn has been a favorite dish in the Puerden family. The children say I never cook enough of it at a time to satisfy them. Start the drying process by going to the garden after the corn yourself. It must be just right for the table—young, sweet, and tender. Never dry corn that is a little old or that has been gathered long. We think there is no sweet corn worth planting in our garden but Golden Bantam. Boil or steam it on the cob eight to ten minutes to set the milk. Drain and cut the corn from the cob, using a sharp and flexible knife, cutting only half way down to the cob. Scrape out the rest of the grain, being careful not to include any of the chaff. My fourteen-year-old son accuses me of inconsistency. He says I advocate more bulk or cellulose in the diet, and yet I object to eating corn cob. Spread the prepared corn in shallow layers on trays, and dry in any preferred way. I have had delicious dried corn by drying it in the sun, but this method is somewhat slow, the product is rather dark, and the weather is not always favorable. I have tested an evaporator consisting of a shallow tin tray above a deeper one containing boiling water. This seemed to cook the corn rather than dry it, and much of it was wasted by sticking to the tin. I now use shallow tin trays in my gas-oven, running only one burner turned very low and with the oven door open. The corn should be stirred occasionally to make it dry evenly. I also contrive to dry corn in the warming oven during baking. If you have any left after serving green corn on the cob, cut it off and put it into the warming oven and it will soon be ready to add to your store. When corn is dry, but not hard, condition it by storing it in boxes and pouring it from one box to another once a day for three or four days before putting it away in your storeroom.

To prepare dried corn for the table, soak it over night in a very little water; put it on to cook in the same water; bring it to a boil and simmer gently three quarters of an hour, or until tender. The water should be nearly absorbed when done. Do not drain off any of the water or you will waste half of the delicious flavor and much of the food value. When done add a little cream, or butter and milk, and season with salt and a very little pepper. If you have followed all these directions your dried corn will be so sweet that you can hardly convince visitors you have not sweetened it.

Driers consisting of fine-mesh galvanized wire cloth arranged one above another in a framework of lath can be cheaply made at home, and used hung above the kitchen range. The electric fan may also be used for drying some things, if one has the current. I should expect to find corn all over the room if I aimed an electric fan at it. Driers may be used on radiators, and this is the easiest method of all if the weather happens to be cold enough to necessitate heat, which sometimes happens early in the fall. String beans may be dried in much the same way as corn. Prepare them as for cooking and spread out to dry, or they may be blanched — that is, plunged into boiling water from six to ten minutes, and then dried, after removing the surface moisture between towels. Peas may be shelled and dried, or dried after blanching three to five minutes. Lima beans, if ripe, are shelled and dried very easily. If desired green, shell and blanch five to ten minutes and then dry. It is well to heat beans thoroly before storing, to kill all insect eggs. Green peppers may be dried after splitting and removing seeds, or they may be steamed until tender and then dried.

Onions, leeks, cabbage, cauliflower, and all root vegetables have been successfully dried, but there could be no object in drying these for home use if one has a reasonably cool storage place, as most country people have. Pumpkins and squash may be peeled, cut into one-fourth-inch strips and dried, or they may be cut thicker, blanched three minutes, and then dried.

Our grandmothers used to dry pumpkin by cooking it and straining it, just as you would prepare it for a pie, and then spreading it in thin layers in trays and drying it until tough and leathery. This was cut into strips and packed away in jars, and I know a man who thinks that pies made from pumpkin dried in this way were better than any modern pies, altho he is not the sort of man who is forever praising his mother's

cooking to his wife. This is one trouble with this method. The pumpkin strips will not keep well, not if the children have access to the store room.

Apples, pears, and quinces should be peeled, cored, and sliced. Dip the slices into a weak salt solution, 8 teaspoons of salt to the gallon of water, to prevent discoloration, and then dry until tough and leathery, not hard. You may dry peaches either peeled or unpeeled. They should be cut in halves and the stones removed. Berries, plums, cherries, and apricots may also be dried. Do not forget to condition all dried foods in the way I described for corn.

In storing your product it is well to have it in rather small containers. Then if insects should get a start they will not be so apt to spoil a large amount. A cool dry storage place is desirable; and if you have enough glass or tin containers your food will be safer. Defective fruit-jars do nicely, and most housekeepers have a supply of empty coffee, baking-powder, or cocoa cans as well as empty lard-pails.

HONEY CINNAMON ROLLS.

About 3 cups bread dough, measured after rising once; 1-3 cup butter or oleomargarine; $\frac{3}{4}$ cup extracted honey. Cinnamon to taste.

Roll out the dough very thin, about $\frac{3}{8}$ inch. Spread it first with butter or oleomargarine and then generously with honey, and sprinkle with cinnamon. Roll up in a long roll, cut across in pieces $1\frac{1}{2}$ inches thick with a sharp knife, and stand on the cut ends in a well-oiled baking-pan, allowing plenty of room to rise. Scrape up all the honey which has oozed out on your kneading-board in the process of cutting and spread over the rolls. Allow them to rise until double in bulk, and bake in a moderate oven, watching carefully to prevent scorching. When you try this recipe and get honey all over your hands, knife, and bread-board you will undoubtedly decide you do not like Stancy Puerden at all; but when your family sample the finished product you may reverse your decision. These rolls keep moist much longer than those made with sugar. I once hid some so successfully from my family that I forgot them myself for a couple of days, and they were moist and fresh-tasting.

To vary the above recipe and make it richer, sprinkle nut meats over the dough before rolling it, or dot it with English currants. Also instead of bread dough you may use baking-powder biscuit dough. In the latter case, make it rather plain and dry, as the honey softens it.

"BEEKEEP-
ing is a
man's busi-
ness," page 519.
And it was the
editor that said
it! Oh, well! we
don't mind, we
women — even
if it is. We like it just as well, may be a
little better.

I am forever talking about the value of reading, and am glad Prof. Baldwin called attention, page 538, to what Dr. Phillips expresses so forcibly, "To be a good beekeeper one must read and re-read the books and journals pertaining to the subject." A few months ago we bound several years' files of GLEANINGS with nails, as described on page 37, January 1, 1915. Of course the bound volume is not elegant in appearance, nor does it lie open flat; but even this crude binding does make reference much easier than when the copies are loose, and it doesn't cost anything at all. Subscribe and read, and then bind and re-read.

One thing I have always rejoiced in is the fact that the bee journals do not make a practice of painting beekeeping in rosier hues than the facts will justify. In this they have seemed to me particularly conscientious and fair. They do not as a class suggest that anybody can get rich with a few colonies of bees in a back lot. Neither the uncertainties involved nor the work and study required are minimized by the journals devoted to apiculture. But occasionally some other publication, perhaps with the best intentions and as a result of ignorance or misinformation, will quite utterly misrepresent conditions.

I recall that our own first interest in bees hatched out of an article in a poultry journal, the idea of the article being that beekeeping was a particularly fine side line to go along with poultry-raising as all you had to do was to put a hive or two out in the yard, and the bees would do the rest. That idea had a particularly winning appeal. So we became beekeepers. We continued as beekeepers, not because there is no work involved, but because there is—fascinating, challenging, alluring work, with its own healthy chance of reasonable profits.

The most recent example that has come under my observation of exaggeration that amounts to misrepresentation seems particularly regrettable, because it is in an advertisement of one of the Department of Agriculture bulletins. Needless to say, the Department has nothing to do with it. A daily paper, fired with the ambition to serve

Beekkeeping as a Side Line

Grace Allen

the public in these days of unwonted activity, when every one is doing his bit and learning as many new bits as he can, has advertised differ-

ent bulletins of practical value on gardening and foods and canning, and now on bees. And in these advertisements of the bee bulletin occur these sentences: "There are tons of potential honey in every vacant lot, suburb, and pasture." "A vacant lot overgrown with weeds has a hundred pounds of food in it." "The bee is the only domestic animal which you can keep almost anywhere, and which requires no feeding. All he asks of his keeper is patience and understanding of his ways." "I ask," says the bee, "neither food nor clothing, and only a box for a shelter."

Yet the bulletin itself says: "It is a mistake to paint only the bright side of the picture and leave it to the new beekeeper to discover that there is another side. Where any financial profit is derived, beekeeping requires hard work, and work at just the right time, otherwise the surplus of honey may be diminished or lost. Few lines of work require more study to insure success. In years where the available nectar is limited, surplus honey is secured only by judicious manipulations, and it is only thru considerable experience and often by expensive reverses that the beekeeper is able to manipulate properly to save his crop. Any one can produce honey in seasons of plenty, but these do not come every year in most locations, and it takes a good beekeeper to make the most of poor years. When, even with the best of manipulation, the crop is a failure thru lack of nectar, the bees must be fed to keep them from starvation."

Of course the bulletin goes on to condemn box hives: "The keeping of bees in boxes, hollow logs, or straw 'skeps' is not profitable, is often a menace to progressive beekeepers, and should be strongly condemned. Bees in box hives (plain boxes with no frames, and with combs built at the will of the bees) are too often seen in all parts of the country. The owners may obtain from them a few pounds of inferior honey a year, and carelessly continue in the antiquated practice. In some cases this type of beekeeping does little harm to others; but where diseases of the brood are present the box hive is a serious menace and should be abolished."

The bulletin itself, if procured and read,

will thus correct the wrong impressions left by the advertisement; but any one who merely reads the advertisement without sending for the bulletin may happen to buy some bees, firm in the belief that they need only a box for a shelter, and set them out in his yard to gather part of the tons of honey in some adjoining weed-covered vacant lots. Thus he will lay himself liable to keen disappointment, and probably will pass soon into the ranks of slovenly, disastrous beekeepers.

As to bees being a good side line for a poultryman, so they are, even as chickens are a good side line for beekeepers, and either one or the two together justifiable side lines for anybody. However, there is no question but bees make a more ideal side line than chickens for a woman, or for a business man. The chickens require care every day in the year. No matter what the weather, the poultryman must go out into it to look after his flock. When he goes on a vacation, some arrangement must be made for their care. With a farmer, of course, they are no drawback, as he has other live stock that requires daily care, and so the chickens add no particular complications in this way.

With bees, the case is entirely different—no paddling around in the rain, no braving of winter storms; and, given the proper care before being left, they will look after themselves during vacation-time.

Now, side lines are undeniably of real value in people's lives. "All work and no play" has been weighed in the balance and found wanting, long years ago. But there is play and play. To many people, play for its own sake offers little satisfaction, and those are usually the ones who adopt some avocation or side line to bring the needed relaxation and refreshment. "And while sometimes the conditions of a person's life may unfortunately forbid the exercise of his tastes in his real work, everybody can, within reasonable limits, choose his own avocation. So for thousands of people it represents the very thing that would have been, under happier or at least different conditions, his main work. With others, it is chosen to make a complete contrast to the chief business of life. And always it yields many hours of utter delight and satisfaction.

Take the case of Dr. F. C. Freeman, of Chattanooga, Tennessee. Starting two years ago with two colonies, he increased them that season to five, tho the three new ones were still rather weak by fall. "The orthodox thing to do," he writes, "was to double them up; but not being very orthodox, either in religion, politics, or medicine,

why should I be in apiculture?" So he thought things out for himself, gave the hives pretty good protection, fed a little during warm spells thru the winter, for they were short of stores, stimulated a bit in the early spring, and the weak colonies came out of the winter stronger than they went in. Last year he increased further to nine, and again wintered successfully—this time without protection. So now he says he feels like a "sophomore in apiculture, just oozing with advice."

Dr. Freeman's immediate surroundings consist of extensive railroad yards, a baseball park, and forty-three acres of playground, all of which, he cheerfully admits, "are as good for flowers as the cinder heap of a near-by furnace. But I cannot believe that any one will go into beekeeping just for the money or even for the honey alone. I began to play with bees, not so much for profit as for a pleasant diversion, which they have certainly proved to be."

Moreover, Dr. Freeman has made part of his hives for the sheer delight of it. As he prefers the Danzenbaker hive, he is utilizing some white-pine boxes he has discovered, with $\frac{7}{8}$ ends and $\frac{5}{8}$ sides, each of them as wide as the depth of a Danzenbaker body. The top and bottom of this most convenient box being of matched material, he makes them into telescope covers and finishes with asphalt roofing. Because of the sides of his home-made hives being thin, he uses a division-board on each side. Corners are rabbeted and nailed both ways, and the result is everything solid and tight and satisfactory.

He has also put a "reducer" in his light current, and imbeds the wires in his foundation by electricity. But he adds, "Don't try to make your own hives unless you have suitable tools and are skilled and happy in their use." Right good advice this is, too. But he loves it himself, having used and enjoyed tools since childhood, so the making of the hives is just another bit of pleasure in his beekeeping. He sums up by saying, "Tho I am in a poor place to make money, and so far have had little honey, I should be very loath to be without the interesting little fellows in the back yard, and I know there are thousands who would gain profit, knowledge, and diversion if they would become back-lot buzzers."

* * *

STUTTERED STORIES.

(With apologies to Dr. Miller.)
There once was a woman (not me!)
Whose stories were crooked as Z.
Told early, told late,
No tale was told straight—
She stuttered her stories, you see.

THERE is no time in the beekeeper's year so interesting and so exhilarating as when the swiftly revolving extractor throws the multitude of tiny streams of golden honey from the heavy combs. It is the realization of the beekeeper's ambition—the culmination of his fondest hopes.

A word of caution is necessary, for the beginner in his eagerness may decide that the honey is thick enough before it is sealed over, and that all the hard work on the part of the bees in capping the honey, and on his own part in uncapping it afterward, may just as well be saved by extracting the combs before they are sealed over. This is a serious mistake, for the bees themselves are the best judges of the ripeness of the honey; and since they do not seal it over until it has reached the proper consistency it is far safer to let them decide, and adopt the rule of never extracting a comb that is not at least three-fourths capped over on both sides. If the honey is so nearly sealed, it is safe to assume that the bees in the next few hours will cap the rest. Perhaps the majority of the combs may be entirely sealed over; but the beginner and professional beekeeper alike can not do better than resolve never to extract a comb that is not at least three-fourths sealed on both sides.

Some beekeepers work from hand to mouth, that is, they have not more than two supers of extracting combs per colony; and as soon as one super is nearly sealed over they extract those combs in order to give more room. This plan, while it requires a less expensive equipment of supers and surplus extracting-combs, requires more careful watching and rather more time during the honey-flow. Others go even so far as to pick out two or three full combs from a super, extract them, and then put them back again. If one has plenty of time at his disposal there is, perhaps, no objection to this; but it can not be recommended as good practice for one who wants to make the most out of his business with the least expenditure of labor.

The other plan, to which there is no possible objection except the added first cost of the equipment, is that of leaving the honey on the hives, tiering up super after super, and then extracting the whole crop at one time. Of course, where two honey-flows are close together the extracting should be done at the close of the first flow, so that the two crops, if of different flavor and color, may

BEGINNERS' LESSONS

H. H. Root

LESSON No. 7—EXTRACTING.

possible the first year. Instead of extracting one or two combs in a super when they are full, it is much better to allow the bees to build new combs from full sheets of wired foundation. This is one of the very best forms of preparedness and a bit of business foresight that the beginner especially can not afford to overlook.

UNCAPPING THE HONEY.

Assuming that the combs have been freed from bees by either of the plans given in Lesson No. 6, the first work after a suitable outfit has been prepared is to uncapp the combs. The uncapping-barrel, which was a favorite form of capping-receptacle of the late W. Z. Hutchinson, is a practical, inexpensive outfit. This is pictured on page 542 of the July number. Cracker-barrels, especially those without heads, are cheap and they answer the purpose very well. When one barrel is full of cappings, packed down as tightly as possible, it may be moved over another tub to drain still further, and an empty barrel put in its place.

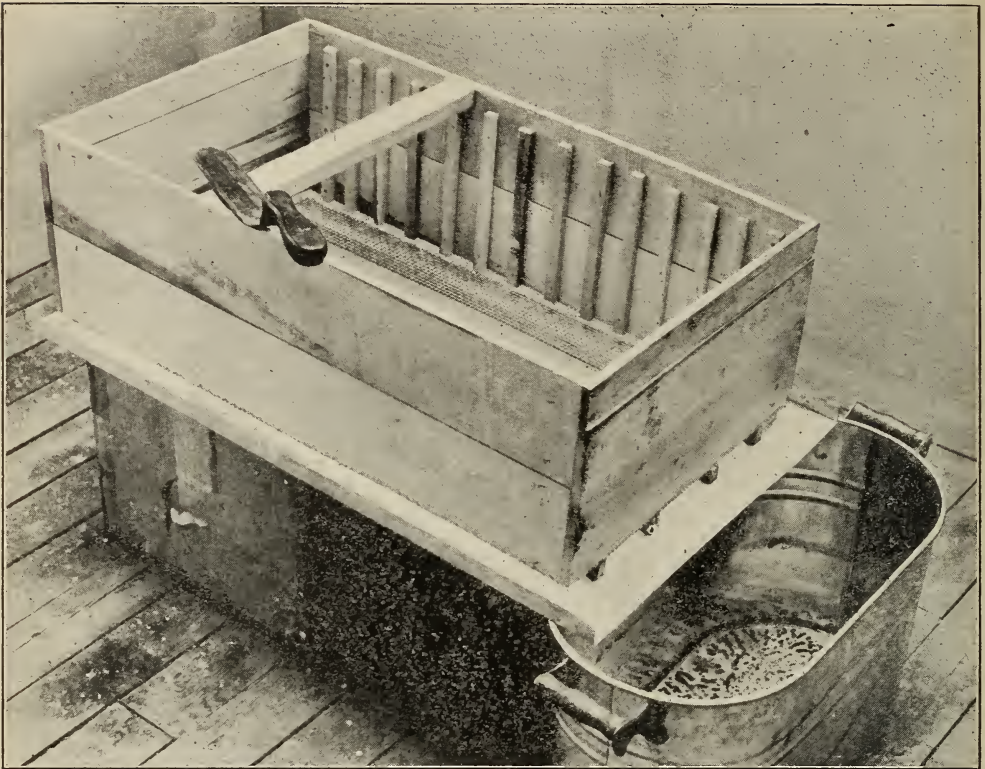
A somewhat more convenient arrangement, and one not very much more expensive, is the uncapping-box, shown in the illustration accompanying this lesson. This box ought to be about 19 inches wide, so that the uncapped combs can be placed cornerwise in one end before they are extracted. In this way no extra paraphernalia is needed to take care of the honey dripping from these uncapped combs. The box may be any convenient length. A cross-piece with a nail-point in the middle on which to rest the combs furnishes a good support.

The bottom of the box is covered with heavy screen and supported from the galvanized iron tray by $\frac{1}{2}$ -inch cleats nailed on lengthwise. If preferred a larger number of cleats can be nailed on, not over $\frac{1}{4}$ inch apart, and the screen dispensed with.

In uncapping, it is always best to have the bottom-bar of the frame nearest the right hand, for the bottom-bar is narrower than the top-bar, and the uncapping is, therefore, easier. When one side is uncapped, the comb should be reversed, therefore, end for end, instead of being merely whirled around on the nail-point.

There is a knack in uncapping rapidly, and this "knack" cannot be described nor photographed. It is acquired only thru the

not be mixed. If the beginner is looking to the future and desires to plan, he positively must not yield to the temptation to get all the honey



Plain box for capping-receptacle with a screened bottom resting on galvanized tray. The uncapped combs are set in the lower end until they are put into the extractor. Thorough stirring and punching the cappings hastens drainage.

school of experience. It helps to have the knife hot, and, therefore, a pail of water practically at boiling point is a help. A steam-knife is far better; but unless the beginner has at least 50 colonies it would hardly pay to invest in a steam-knife, boiler, etc.

IN THE EXTRACTOR.

When putting combs into the extractor care should be taken to select two that weigh about the same, otherwise the reel will be unbalanced and will do an immense amount of shaking about. If the combs are new and fragile, that is, if no brood has ever been reared in the cells to strengthen them by means of the fibrous cocoons, the handle of the extractor must be turned slowly at first until the bulk of the honey is out of the first side, then the pockets swung around and the handle turned slowly again for a few revolutions. Then the reel may be speeded up and all the honey extracted from the second side. Finally the pockets must be reversed to the first side again and the rest of the honey extracted there. In this way the fragile combs may be extracted without breakage. Tough old brood-combs do not require such careful handling, hence

the advantage of using them for brood by the plan given in Lesson No. 6.

No honey should be drawn from the gate at the bottom of the extractor until there is enough to reach within two or three inches of the bottom of the reel, then a pail should be set underneath and the gate swung wide open. The pail will fill in a very few seconds; and during this time the hand should never be taken from the handle of the gate. Running honey over on the floor just once will forever cure any one of the habit of taking the hand off the extractor-gate. By waiting until there is quite a depth of honey in the bottom of the extractor, the pail fills quickly, and practically no time is lost. Walking over a floor sticky with honey is not pleasant, and trying to clean it up without hot water is worse still.

The pail of honey should be poured into the strainer-can, and, as mentioned in Lesson No. 6, no honey should be drawn from this strainer-can until it is full. In this way bits of cappings and foreign material will float to the surface so that there will be no danger of the cheese-cloth bag clogging up. The honey should be drawn off into cans no faster than it is poured into the strainer.

GLEANINGS FROM THE NORTH, SOUTH, EAST, AND WEST

IN CALIFORNIA

THIS has been the first season in my beekeeping experience that I have not had a fertile-worker colony. The secret is, a young queen in every hive.

The best insurance you can have on your bees is a clean, fireproof yard. Several yards have already been burned this season because they were not properly cleaned.

The interior foothill region seems to have had the advantage this year in that the fogs did not always reach so far from the coast, thus giving more time for the bees to work.

Be cautious about taking too much honey this summer. It is a big temptation, I know; but next season is just as uncertain as this, and may require even more honey to carry the bees to safety.

Foggy days are nerve-straining days for the beekeeper in this region; but there is the satisfaction of not having hot desert winds while the fogs are hanging around. That gives a little consolation, even if it isn't much.

A bad day during an excessive honey-flow is not always a loss. It gives the bees a chance to clean up and make room for the queen. Every bad day after that is accomplished, however, is a total loss if the colony is in proper condition.

A new swarm in a heavy honey-flow will draw a full set of foundation almost as quickly as it will fill empty combs, and there is the additional value of the queen having a chance to lay before so many of the cells are filled with honey.

I have always preached "plenty of stores." This season has fully exemplified my sermons. There was one time this spring when another week of bad weather would have caused a loss of bees that would have been a disaster. As it was, some of the very best colonies were starved for lack of honey because the enormous amount of brood had consumed more than the beekeepers thought possible.

Last autumn I had a ton and a half of surplus honey on my hives, and debated as

to whether I should extract it or not. Conditions at my

ranch were not the best for extracting, so I decided to leave it until spring. When the spring honey was coming in sufficient to make all colonies safe I had less than 300 pounds of my big surplus left. That means there was nearly a ton and a half more consumed than the amount I judged would leave them safe until new honey would take care of them.

THE SCALE COLONY'S RECORD.

The season of 1917 will long be remembered because of its extremes. The average temperature during the entire winter was below normal. This continued into the spring, tho there were sufficient warm days to induce the heaviest breeding that we have experienced for several years. I will give a little review of the work of my scale colony from April 19 to June 19, the changing of the scale being due entirely to bad weather. The numbers following indicate pounds; g. means gain; and l. loss. Apr. 21, g. 4½; Apr. 22, g. 2½; Apr. 23, g. 1½; Apr. 24, g. 5; Apr. 25, g. 6; Apr. 26, 27, 28, net loss of 4 pounds; Apr. 29, g. 6; Apr. 30, g. 1. May 1, g. 10; May 2, l. 3; May 3, g. 4; May 4, g. 7; May 5, g. 14; May 6, g. 13½; May 7, g. 3; May 8, 9, 10, the net loss was 7 pounds; May 11, g. 3; May 12, g. 10; May 13, g. 11; May 14, g. 7½. During the rest of the month the daily gain only equaled the loss. June 1 gave a gain of one pound, with the following four days showing a gain of 2 pounds daily, while the 6th showed 4 gain. June 7, g. 6; June 8, g. 4. From the 8th until the 13th the gain was about 4 pounds daily; then the great heat wave stopped the flow suddenly, and the beam remained balanced. Today, July 4, the scale is at the very point where it was on June 15. It may be figured from this that we had only five perfect honey-gathering days in the month of May, and this at a time when the daily gain would have netted not less than ten pounds. Ten more perfect honey-gathering days in May would have doubled the honey crop in the orange district.

THE TERRIBLE HEAT WAVE.

Another disaster has befallen us—not a freeze this time, but an unprecedented heat wave following an exceptionally cool spring. On the 13th of June the temperature began

to go higher and higher each day until by the 17th it had reached the phenomenal height of 119 degrees in the shade by government-station records. The air was like a furnace, and the damage done can hardly be estimated. The lemon crop is largely on the ground; late oranges that were not picked were injured badly, while the next year's naval crop is practically an entire loss from the fact that the young oranges have nearly all dropped off. And the beekeeper did not escape. The damage by melting down has proved to be greater than at first thought possible. The number of colonies melted down will amount well into the thousands, some apiaries having lost over a hundred colonies, while few escaped without the loss of at least a few colonies. New swarms were

the greatest sufferers, many having literally melted down and run out of the hives, wax and all. One party reports a loss of 90 per cent in one yard, including old and new colonies.

Fortunately I did not lose a single colony, and only one comb. This I attribute to the fact that my hives are all well painted, and white, together with the fact that I use a lid with a rim that leaves a dead-air space of 2 inches above the frames. I have never had a colony melt down under one of these lids. This lid is known as the Chadwick lid; but to my uncle, J. K. Williamson, should be given the credit of origin. Under no circumstance would I abandon it for any other lid on the market. It is a colony-saver, without a doubt.



“ANY honey-dew yet?”

That was a sort of universal greeting at the little county meeting July 7th. “Not yet, but lookin’ for it ‘most any time,” was the usual answer. Such a slim little crop as was in the hives seemed to justify leaving it there as long as there was the slightest chance of more, yet the honey-dew scare hung over us all. It has its uses, honey-dew honey, but we don’t want it mixed with our nice white clover.

Beekeepers are not easily cast down—fortunately. Admitting less than half a crop this season when of all seasons we most wanted that elusive bumper crop, the regular quarterly gathering—together of Davidson Countians was particularly pleasant. The glaring sun kept us moving, to stay within the shade of the persimmon tree; but in spite of heat and glare and the genuine disappointment as to the honey crop, friendly good cheer ruled the day, while we munched apples and “swapped” ideas. Mr. J. M. Buchanan, of Franklin, was a welcome guest who discussed the market condition in general and reported conditions in Williamson County as no less disheartening than in Davidson.

The main talk of the afternoon was by E. J. Adkisson, Nashville, on “Transferring.” This is an important subject in Tennessee, where, unfortunately, there are so many bees in box hives, and it was ably handled by Mr. Adkisson. Often beekeepers have an opportunity to buy bees cheap out in the country districts, but they have

THE DIXIE BEE

Grace Allen, Nashville, Tenn.

to take them in boxes or gums or any sort of makeshift. Then

skillful transferring becomes very important.

The comical feature of the occasion was the sudden entrance of an immense and ponderous truck that snorted right into the yard and directly thru the rapidly scattering little convention! It was loaded with all sorts of merchandise to be delivered in the neighborhood, including some iron rails that stuck out several feet behind its own great length, and went knocking and bumping against things on all sides, whenever the truck turned a bit. And it was bringing us a belated shipment of pound bottles to contain the honey we had just admitted we did not have. I suppose we shall somehow find room to stack them alongside the unused new supers and five-pound packets. We were prepared this season, all right, but to no avail.

On page 546, Prof. Baldwin quotes Mr. F. M. Perry as saying that “the best and surest way is to clip the queens right on the combs, not touching them with your hand.” Some one, I believe it was Mr. Byer, once suggested that method for me to try, claiming it as his favorite. I have tried it, or at least I have tried to try it. I have failed so far, probably because I am so afraid it won’t be the wing that will get clipped. It looks too risky for me. Picking up the queen and then performing the operation in the hand seems easier for me to learn.

I once had a queer clipping experience.

I had picked up the queen with my right hand and transferred her to the left. I glanced away a second to pick up the scissors, and when I looked back the little queen had collapsed, utterly wilted, right there where I held her by the feet between the end of my thumb and the tip of my first finger. In amazement, I laid her on the broad end of the hive-tool, where she lay completely crumpled up, shriveled, and motionless. I was overwhelmed with regret and astonishment. I could not understand how I had killed her, yet there she lay. I waited and watched several minutes, finally remarking to the world in general, "Well, there's no use sitting here watching over a dead queen." Because of a little whimsical foolishness that swept over me as I was about to toss the body away, I slid it off instead on the top-bar of one of the frames, and bade the bees mourn for their dead. And, behold, the dead came to life. As quickly and mysteriously as she had crumpled and wilted, she now stirred and straightened out, the abdomen came back to normal size, and with her bees around her she soon crawled down between the frames. I was afraid she was permanently injured, but she continued to do a brisk business, apparently none the worse for the experience. I still don't understand it. I suppose I must have hurt her in some way, tho I would do all but swear on the witness-stand that I touched nothing but wings and feet. It was several days before I ventured to clip her, but that time she came thru all right. [Your queen had what is called queen "cramps"—a condition that is probably due to fright.—Ed.]

MORE PREPAREDNESS.

Reverting again to Mr. Crane's wise dictum that "the best time to study wintering is in the spring," I want to refer briefly to that cooling subject, in spite of this being neither spring nor winter. When people are not quite sure what their policy will be, or should be, they are but too prone to loiter along in that undecided state, doing nothing, till it is too late to do anything anyway. If we are going to pack our hives this fall, we ought to do it in October or early November, and I want to take up this subject, the Editor willing, somewhat thoroly in the next two numbers of GLEANINGS. So to set the ball rolling, let me put it this way.

The Department at Washington, as I see it, seems to have two particularly important lines to work along, thru the extension workers in the South: First, the education and enlightenment of the utterly un-

educated and unenlightened, of which, because of our remote and mountainous districts, we have more than our share; and then the general improvement of methods among those always most eager to improve, that is, the reading, progressive beekeepers. And among this latter class the federal workers seem to feel that the biggest step toward greater success will come with the adoption of winter packing. And by our most intelligent consideration of their suggestions, and the experimental adoption of them whenever possible, we want to help them to help us to improve ourselves.

But here is how it looks to some of us. Our winter losses are reported as something quite scandalous. But by far the most of this loss is in the yards of that large untrained contingent that uses box hives and old gums and cracker-box equipment, and of course does everything in connection with the bees in a slipshod fashion. Among the other class, the winter losses are not heavy—at least they have not been during the last few years. Last winter was a "corker"—low temperatures, high winds, sudden changes, wide variations, and at those times winter cases sounded very convincing. Yet among the beekeepers around Nashville, the beekeepers who belong to the Association and come to conventions and read GLEANINGS, there was almost no loss at all. Yard after yard of from twenty to fifty unpacked colonies lost not a single colony, or perhaps one from queenlessness or one or two from shortness of stores, these entirely understandable accidents that will occur occasionally in the best of apiaries. The larger beekeepers had very slight losses—five out of 180 in one case, as an example. Then the bees built up quickly and strong thru the late cold spring, and it really does seem to us, looking at it quite impartially and with the most earnest desire to do the best thing (who can possibly care so much as we?), as tho well-built hives, strong colonies, vigorous young queens, plenty of stores, and contracted entrances are about all we need. Some put on packed supers, some wrap hives in paper, but that is about as far as the most successful have gone, up to this time.

On the other hand, Mr. Bartholomew, basing his statements on the thoro, scientific work in Washington, assures me we would be amazed at the worth-while-ness of the extra labor and expense.

I have a most interesting letter from Mr. L. E. Webb, of Morganton, North Carolina, along these very lines. He is naturally very deeply interested in this wintering problem—so much so that he plans to ex-

periment with the winter cases; yet he does feel as tho his own wintering has been almost all he can desire. He has never had any winter losses, and his colonies come thru strong and vigorous in the spring.

I should like to hear from others in this Dixie land on this most vital subject. May we not have, as Mr. Webb suggests, a sort of symposium of intelligent views? Tell us what you have done toward protection in past years, and with what result; and what you plan to do this winter, and why and how.

These July days are hot out in the bee-

yard, white linen being almost the only endurable dress. And I choose white or tan hose and shoes over black.

Way down south in Dixie, oh it's gettin' mighty dry, Sun gets hot and hotter as it creeps across the sky; Clover heads turn brown and browner—dry almost as dust—

And I reckon Dixie bees will quit, and give up in disgust.

May be, tho, they won't stay quit; some merry summer day

A certain "sweet secretion" will too likely drop this way.

Honey-dew (alluring name!) will tempt our down-cast bees,

And then—will M. A. O. ship down some quoted language, please?



EVERY season has some peculiarities; but 1917

NOTES FROM CANADA

J. L. Byer, Markham, Ont.

so far seems to be out of the ordinary as it has consisted entirely of "peculiarities" so far. A very cold and long-continued winter caused would-be weather prophets to predict an early warm spring. As we all know now, the spring was very backward, and late and cold. Then we were told that summer would be earlier and warmer than usual—result, June was the coldest on record. And so it has continued, and clover is the latest in bloom that many of us have ever experienced. The first nectar to amount to anything from this source came in on July 5. The ground is saturated with moisture; and clover, altho backward earlier on, is now rank in growth, and heavy rains are falling as I write, July 7. With heat following, it is hard to understand how clover can fail to yield nectar; but then we may not get the heat if previous months of this peculiar season is a sample to judge from.

However, *prospects* at this date for a crop from clover and buckwheat are good, if, as already intimated, we get warm weather—something that we generally get in July in this part of the country.

In connection with the sale of honey this season, that I refer to in another paragraph, never before have we received so many orders in advance for honey, provided we have a crop. It is a common thing to get orders from individuals for 100 or 150 pounds of honey; and in almost every case they will stipulate that they are willing to pay whatever is the ruling price when honey was ready. Honey got a great boost last season because of its excellent quality, and it is to be hoped that any harvested this year

will not disappoint consumers that are sure to look for a high standard of quality. Little has been said as to quality having a great deal to do with possible prices; but no one will deny that it is one of the prime factors in deciding the question.

While clover is late this year, a big acreage of buckwheat has been sown at the usual time. While we are always glad to see fields of buckwheat, this year we are filled with mixed emotions when we see buckwheat up two inches or more at a time when clover is just starting to yield. Judging by other seasons, we may expect buckwheat to be in bloom at the time clover should be yielding its best.

It is possible to have colonies too strong at the opening of the clover flow—page 511, June issue. Possibly; but who would not take all chances in that line rather than have them *too weak*? At our north yard the bees build up much faster than they do here in York Co., for some reason; and the strongest colonies, if left alone, will break up at the opening of the flow from clover if not earlier. It is common for us to have three full-depth brood-bodies occupied by the queen quite early in the season; and the only way to hold them back is practically to strip them of brood at the opening of clover. With an immense force of bees at that time, a crop is sure to be gathered if there is any nectar going. At the opening of the flow the queens are confined to an eight-frame L. body; and the queens soon occupy that amount of room, which means a good colony for later work in season. While we like to see these big rousing colonies, yet if left

alone they will break up by swarming; and more than once we have had colonies just ready for the clover flow, when it opened, store more honey than some of these so very strong earlier in season.

* * *

In the June issue of GLEANINGS the editor speaks of the backward spring weather, and comments on the fact that, for all that, the bees have bred up very fast. Same here with some qualifications. Such a condition was noticed till along about fruit bloom, when for some reason or other we had a rapid loss of field bees. The result is that, altho the season is so very late, yet many of our colonies strong earlier in the season are not in prime shape for the clover flow—not that they are actually weak, as hives are full of brood in all stages, and have many bees as well. But a great proportion of these bees are *babies*, and are not ready for field work. Feeding for three weeks preceding clover would no doubt have helped a lot to avoid the present condition; but with a lot of bees and steady cool weather, not to mention the outlay for sugar, we did not feel like taking any chances, and simply made sure that all colonies had stores enough to carry them thru.

* * *

WHAT SHALL I ASK FOR MY CROP?

As to honey prices, the editors of this

journal invite us to say what we have been offered, and what we think we *should be offered*; also any other thing in connection with this problem that might be suggestive for the general good of the fraternity. Personally I have already given my ideas in a vague way as to the situation; but, frankly, I am not sure as to what we should ask provided we get a crop. Everything else is high—no doubt of that; but as to whether we are justified in trying to sell honey at a price proportionate to prices asked for some other food products—that is another question. There is a possibility—nay, a probability—that some honey will be sold too low, as firms have already offered (and no doubt have bought) some honey at a price we would nearly all say is too low by all odds. On the other hand, there is a tendency on the part of some—at least we see it that way—to try to boost the price too high, thus killing the demand. After all, our old-time friends, *supply and demand*, will be the greatest factor in determining prices. One large producer writes me that he has sold his crop (yet to be produced) whether large or small, at 13 cts. f. o. b. shipping-point. He did not say what package it was to be put up in. Another large producer has been offered 12 cts. in gross-weight pails—fives and tens, and has refused the offer. That is about all we know to date as to sales for this year's crop.



THE bee situation over the state at this time is very

IN TEXAS

F. B. Paddock, State Entomologist

interesting, even if it is not promising. Generally speaking, conditions over the greater portion of the honey-producing area are as bad as have ever been known to exist. Reports indicate that conditions vary within the usual well-defined sections. In the extreme southwest locality conditions are fair. There is plenty of flow for the bees to rear brood, but not enough for a surplus. If a rain occurs, there may be a good fall flow. Conditions are worse in the northern localities of this section, until at the upper edge the bees are only 45 per cent normal. The bees are without stores, and in some cases starving. Here there are no prospects for a honey-flow of any kind. Thruout the Southwest the condition of the bees is about 40 per cent normal with but little prospect of a honey-flow. In the western section the bees are almost normal, with prospects for a fair yield of honey in

the alfalfa region. In the south-central section the bees

are about 50 per cent normal with no present honey-flow, and with prospects for only a short cotton flow later. Conditions are about normal in the north-central section with prospects of a late cotton flow. In the eastern section the bees are practically normal, and with reasonable rain a good surplus will be gathered. In the northeastern section the condition of the bees is normal and the prospects of a honey surplus from horsemint and cotton are good.

It is only natural to suppose that from such conditions the honey market is very erratic. Except for one locality no honey has been offered for sale thruout the entire south section. In this exception extracted honey brought 15 cents a pound on the local market, for a small offering. Thruout the Southwest but very little honey has been offered and some has sold for 10½ to 12½

in two 60-lb. cases f. o. b. A little honey has been sold in the western section at the same price. Throught the remainder of the state no honey has been offered for sale; but it is yet early for honey to be put on the market in the northern sections.

We regret that we are forced to say that the bee-moth is still causing considerable loss to the beekeepers of the state. Many small beekeepers do not know what this pest is or how to detect its presence. There are still a greater number of large beekeepers who consider the bee-moth a necessary evil. There is a chance to overcome ignorance, but it is a much more difficult matter to counteract indifference. Why some beekeepers are willing to allow the bee-moth to cost them \$10 to \$50 a year is hard to understand. A tax of from 2 to 10 per cent in a direct way would cause much action. The presence of the bee-moth is the result of indifferent methods of beekeeping.

Some time ago mention was made of a move in two counties to put on demonstrations of transferring bees from box hives to movable-frame hives. In each county (McLennan and Anderson) there is a large proportion of box-hive beekeepers. Arrangements were made by the County Apiary Inspector and the County Agricultural Agent to hold these demonstrations in a box-hive locality. Reports from the demonstrations held thus far indicate that the results are more gratifying than had been expected. The time of the inspector in every case was free, but they feel well re-

paid for their efforts. Such encouraging results from the first efforts of such an important work will stimulate those already started to greater effort, and should prove to be an example for many other counties in the state wherein is located a county apiary inspector and a county agricultural agent.

Of late much complaint is being heard, from both the shipper and buyer, of the inability to get pound packages of bees to reach their destination in first-class condition. There has been a very great trade developed this year in this state for bees by the pound. When the investigation disclosed the fact that some ten of the largest beekeepers had in past years shipped successfully to all points in the United States and Canada it was felt that the additional demand of this year would be met satisfactorily. Since no two shippers use exactly the same methods it is impossible to give a single reason for the failure. In some cases it is evident that insufficient water was supplied. In other instances the bees got mussed from the feed provided for them. There is a feeling among several of the shippers that the bees have been smothered by improper care at the hands of the express companies. Of course for some time now it has been very hot, and the pound-package trade has lasted longer than usual, so it may be that heat is largely responsible for the heavy losses. At any rate, improved methods must be devised; for the pound package of bees is a trade that has come to stay, and will certainly develop as the efficiency of shipping is increased.



THE season is two to three weeks late; but since

AMONG THE ROCKIES

Wesley Foster, Boulder, Colorado

June 15 the weather has warmed up so that all vegetation has well nigh caught up. Sweet clover is not more than one week late in blooming, and alfalfa has been yielding honey very well from the first crop. The price of hay has been so high that we were expecting alfalfa to be cut very early; but the farmers seem to be short-handed, and the alfalfa is standing, with the result that bees are getting a chance at the blossoms.

A little surplus honey will be secured from the first crop of alfalfa, but not much. The bees are swarming, and that causes some trouble; but most districts should end up the season with their normal number of

colonies. Sweet clover is not so plentiful as last year, but we

shall doubtless have some honey from it. Horsemint has yielded some honey, and would have done excellently had we been favored with a few copious rains the latter part of June. Our crop will be far more satisfactory if we can have one or two inches of rain before July 15.

HONEY PRICES.

Concerning prices, there are none on comb honey. Beekeepers seem to think comb honey will advance in proportion as has extracted, but I hardly think so. If we can secure ten or twenty per cent more than last year we shall be fortunate.

The retail grocer does not want to pay over \$3.75 a case for comb honey delivered

at his store. Perhaps we shall be able to boost this somewhat, but we have a job ahead of us.

Extracted honey is being sold at almost all prices. The writer has sold quite a few 60-lb. cans at \$9.00 per can f. o. b. Boulder. Pint jars of honey are selling at \$3.60 per dozen, but sales are very limited. Sales will doubtless pick up when dealers realize that honey has advanced sharply in price.

I think that Colorado alfalfa extracted honey should bring 13 to 15 cents. A car has been contracted at 11 cents, and an offer of another one at 12 cents has not been accepted by buyer at this date.

The consumers will pay 30 cts. for a 1-lb. jar of honey, and they will pay \$9.00 for a 60-lb. can, so there need be no fear at the present time that the price will materially decrease. The price will undoubtedly go down while the producers are selling; then when the buyers have their supplies the price will again advance.

ON THE BOTTLING QUESTION.

Some bottlers maintain that they cannot pay 15 cents for extracted and get out on the proposition with any profit. If this is true we may see the bulk of our crop go into the consumer's hands direct from the producer, for the producer can sell to the consumer in 60-lb. cans almost as cheaply as he can sell to the bottler. If the bottler can put up a fifteen-ounce jar to retail at 35 cts. it ought to be possible to pay the producer 15 cents a pound for the honey.

This is the way I figure it out for the bottler, and I believe my figures will not be far off for the bottlers of the country when everything is averaged up.

I figure a 15-oz. net jar will retail at 35 cts., and that the retail grocer will pay \$6.25 a case of 24 jars. The retailer will make 9 per cent per jar profit. The wholesaler will want his full 10 per cent commission. Here it is in figures:

COST OF BOTTLING ONE 60-LB. CAN OF HONEY.

One 60 lb. can of honey at 15 cts.....	\$ 9.00
63 glass jars (in cases) holding 15 oz. each..	2.52
Labels, labor, liquefying, etc.....	.30
Shipping, billing, charging, and collecting,	
including discount .....	.50
Freight, delivering to wholesaler.....	.40
Commission or discount to wholesaler.....	1.64

Bottler's cost of 60-lb. can bottled	\$14.36
The bottler sells this thru the wholesaler to the	
retailer for	\$16.38
Bottler sells the can and case (empty).....	.40

	\$16.78
Bottler's cost	14.36

Bottler's profit \$ 2.42

The consumer pays 35 cts. per jar, or \$22.05 for one 60-lb. can of honey put up in 15-ounce jars. If he bought it direct from the producer he could get it for not exceeding \$10.00.

SMELTER SMOKE OR DISEASE.

Sacbrood has been very prevalent in Colorado this spring, some colonies very nearly dying from the malady. A few producers have transferred their colonies the same as tho foul brood were present. Most cases of the disease, however, have gradually disappeared.

What we are pleased to call smelter-smoke poisoning almost ruined one of the writer's apiaries nearly thirty miles north of Denver. Fortunately there were but 35 colonies in the apiary, but they were reduced from very strong colonies to small handfuls of bees in a very few days. One colony was completely destroyed. This trouble appears during a rainy spell, and does not affect queenless colonies.

We have many theories as to its cause. It may be smelter smoke and it may be city smoke, and it may not be smoke at all. But this trouble is most severe within thirty miles of Denver. The most destructive area is in the Platte River Valley twenty miles down from Denver. A large smelter is near the river in the valley at Denver, and the theory is that the smoke floats down this valley (as it does) and carries the poisonous fumes, the rainy seasons driving the poison from the air to the surface of the ground, and thus poisoning the vegetation and especially the pollen. Beekeepers about Denver have learned pretty well where this trouble strikes most frequently, but there is not a year passes but that some one has bees destroyed. This trouble may explain some losses as far as fifty miles from Denver.

COMBLESS PACKAGES FAILED.

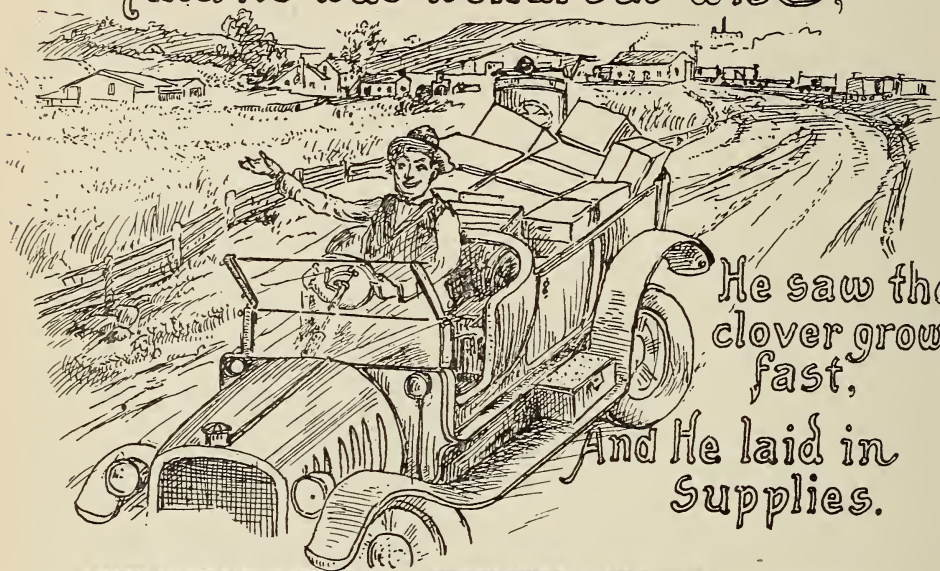
The package-bee business is growing each year; but the effort made this spring to increase production thru means of packages of bees was not very satisfactory. Too many beekeepers attempted to fill orders who had no experience in preparing the packages for shipment. The writer had very discouraging results in attempting to secure 300 two-pound packages. But sixty were delivered, and none were less than ten days late. Two hundred packages were shipped, the other hundred ordered having to be cancelled on account of losses and lateness in shipment. Both buyer and seller lost several hundred dollars by the deal. Production was not increased and much valuable time was lost.

Packages should be ordered very early in the spring so that the shipper can easily have everything in readiness. Liquid feed caused all of our troubles. If candy had been given, the bees would doubtless have gone thru satisfactorily.

Mother Bee NURSERY RHYMES

By M.G.P. (*Mother Goose Plagiarized.*)

There was a man in our town,
And He was wondrous wise,



He saw the
clover growing
fast,

And He laid in
Supplies.



Now, when He saw the
clover bloom,
With all his might
and main,

He put the empty
supers on
And they were
filled with gain



J. H. S., New York. — My neighbor with a cornfield adjoining my beeyard complains that my bees sting his horses when he runs a cultivator thru the field near the apiary. He says I must move my bees away. Can he compel me to do so by law? I cannot move these bees a quarter of a mile, and so what shall I do?

A. The probabilities are that your neighbor could compel you to move your bees provided he could prove that they sting his horses and sting him to the extent that it endangers either the life of man or of beast. Yes, you had better move your bees; but do not attempt to move them only a fourth of a mile, but move them at least five miles away. In the spring of the year or in the fall you can move bees a short distance without great loss. To move them only a quarter of a mile with a honey-flow on would only result in making conditions infinitely worse, as the flying bees would come back to the old stands and be crosser than hornets.

D. L. H., Ohio.—Are artificial cells as good as supersedure or swarming cells?

A. Artificial cells may be built under the management of a skillful queen-breeder that are equal to if not better than the swarming or supersedure cells. One who knows his job can produce conditions artificially that will furnish some beautiful large cells. These artificial conditions might be said to be a combination of the swarming and supersedure impulses. Good cells cannot be raised unless the colony is made strong and highly prosperous by a little feeding every day if honey is not coming in from natural sources.

A. E. F., Michigan.—There is a swamp about five miles from my place. I have no fall flora at the home yard. Would it pay me to move my bees to the swamp?

A. That depends. The whole swamp country should be carefully examined to see if there are any honey-bearing plants. If aster, goldenrod, or swamp milkweed grows in the vicinity it would pay to move the bees provided there are no other bees in the swamp, and it might pay anyway. Practically all swamps, no matter where located, yield some fall flora useful to bees. During the present year, when syrup and sugar are so high, it will pay to practice migratory beekeeping if it ever did.

But be sure to move the bees on a cool day or at night. Unless the hives are well ventilated, moving colonies on a hot day is usually attended with considerable loss.

W. L. H., Ohio.—1. Will it pay to extract the honey and feed up on cheap grape sugar?

2. Can brown sugar be used in place of granulated sugar?

A. 1. No, decidedly not. Grape sugar does not make a good winter food, but it does excellently for the purpose of stimulat-

GLEANED BY ASKING

E. R. Root

ing brood-rearing. Years ago we fed grape sugar as a winter food; but we will not do it again, as practically every colony so fed died. It is a very poor sweet in the

first place, and, what is more, it cakes in the combs.

2. The price of brown sugar is so near that of granulated that it would not pay. Moreover, brown sugar does not begin to go as far, apparently, as the white; nor do bees winter on it so well.

W. S. F., Iowa.—When granulated sugar is 8 cents, and extracted honey 12 cents, will it pay to extract the combs clean and feed sugar for winter?

A. We are inclined to think it would; but when sugar is 6 cents and honey 7, it does not pay. The ratio of difference must be great enough to warrant not only the cost of taking the honey away from the hive and putting sugar syrup in the combs, but there should be an allowance of at least 25 per cent extra to cover loss from the feeder to the sealed cells. When sugar syrup is fed to bees it stirs up the colony to rush to the fields when perhaps there is nothing there. This causes a loss in vital force of bee life. There is also a considerable shrinkage between the amount of sugar syrup fed and the amount actually capped over in the combs. Unless honey, pound for pound, brings anywhere from 25 per cent to 33 per cent more than sugar it will not pay to extract and feed sugar syrup. There is one more consideration, namely, some of our best beekeepers now believe that, pound for pound, sealed honey will go much further than sugar syrup, because honey is a natural food containing other food elements needful in brood-rearing. How much more honey is worth than sugar syrup no estimate has been given.

M. A. B., Indiana.—I have a nice queen, but she has a deep dent in her body. Does it do any harm?

A. If she is doing good work, apparently no harm has been done more than to disfigure her looks a little. Some of the best queens we ever used had a little dent in the abdomen. Others were minus a leg on one side; and while they appeared to go over the combs with a little more difficulty than normal queens, they laid as well as any queens in the yard. We would naturally expect such queens to be superseded a little sooner, however.

L. F. C., Michigan.—What do you do when two or three swarms come out together and unite in one big cluster?

A. Divide them about equally with a dipper and place them in two or three separate hives. Such united swarms work together very nicely, altho they may be in three separate hives. If one bunch of bees gets a part or all of the queens no particular

harm is done except that all but one queen will be sacrificed. Unless one has a virgin or a laying queen to supply the others, they will be queenless. Usually at such times there will be plenty of cells or virgins available to give to each swarm.

K. L. F., Pennsylvania.—Which has the finer flavor—comb or extracted honey, both from the same source and from the same hive?

A. The difference is not great, but slightly in favor of the honey in the comb. During the process of extracting, a very slight amount of the delicate aroma of the honey is lost. The flavor of honey is said to reside in a minute quantity of ethyl alcohol. When honey is exposed to the air, or broken into fine particles as it is during the process of extracting, a very minute portion of this flavor is carried off; but the average consumer will scarcely notice the difference. There are some consumers, however, who say they like comb better than extracted. Whether this preference is due to the desire to chew something, or to an actual difference, we do not know. Under normal conditions comb honey will command a higher price than extracted; but during this year of 1917 it is a question whether extracted will not come pretty near the price of comb at retail. But conditions now are abnormal.

C. L. W., Missouri.—Is there any difference between supersedure cells and swarming cells?

A. The impulse is different, altho one set of cells looks about the same as the other. Supersedure cells can be distinguished, however, from swarming cells usually by the season. The swarming cells will appear during the swarming season only, while the supersedure may show up at any time of the year when bees are raising brood. If the queen is furnishing a small amount of brood, and queen-cells are found in the hive, it may be concluded the bees are about to supersede her, and will, therefore, raise supersedure cells. Of course, it is possible to have cells raised under both impulses—swarming and supersedure. If the queen is beginning to fail at the beginning of the honey-flow, supersedure cells would be started. They would doubtless be hastened on by the swarming impulse.

A. J. C., Kentucky.—I have 100 very strong colonies, most of them two story, and I desire to move them to fall pasture. The weather has been very warm. How would you do it?

A. Nail wire screens over the entrances. Put an empty story on top of each of the two-story colonies. Secure them in place with some crate staples. Two at diagonally opposite corners may be enough, but four are safer. The bottom-boards should be secured in the same way. On top of the whole put a wire screen with full opening.

It is usually not safe to move a two-story colony in hot weather unless it is fully screened at top and bottom. The putting on of an empty story with screen will not make it necessary to screen the bottom. Bees should be moved either at night or on a

cool rainy day. With good hard roads a rainy day is a good time to move bees, as they will all be in the hives before shutting them in.

It is our practice to choose such days in the spring when we are setting out our out-yards. One must be prepared with rubber boots and a raincoat for loading and unloading the bees. Rain on top of the wire screens will do no harm. It is more beneficial than otherwise.

In loading bees on to a truck, self-propelled or horse-drawn, do not pile the hives one on top of the other unless 2x4's are placed between to provide ventilation between the tiers. If the bees have to go on a long drive, taking four or five hours in the hot sun, too much ventilation cannot be provided.

It may be advisable to carry along a can of water and wet down the screens every now and then.

We also advise moving bees with an automobile truck rather than using horses. While the horse-drawn vehicle is cheaper, it is so much slower that it pays to pay a higher price and put the bees thru to destination in a hurry. An automobile truck will do the work in one-fourth the time usually.

J. N., Indiana.—No honey coming in; bees are starving. Is it all right to feed brown sugar? and it is suitable for winter? I can buy granulated sugar that has become dirty. Would this be better than brown sugar? Is there any difference between beet and cane sugar for bees?

A. You can feed brown sugar; and in the absence of granulated sugar it would do very well, either for summer or winter. But granulated sugar is much superior as a winter food. We recommend the use of the dirty granulated sugar in preference to clean brown sugar.

It is claimed that cane is better than beet sugar for canning purposes. In Great Britain cane sugar is recommended in preference to beet for bees. We have used both in our feeding operations, or what we supposed was one and then the other, but have never been able to detect any difference. All granulated sugars we have ever tried have given excellent results.

W. C. B., Pennsylvania.—What is the most effective way of getting bee-glue off the fingers?

A. Alcohol or gasoline will remove it. Lava soap, which can be obtained almost anywhere, will remove a good portion of it. To remove it all, a little sand soap should be used in connection with it. A little bottle of gasoline if kept on the washstand will be found a great help. First use gasoline, and then soap and water.

L. C. F., New York.—What makes the bees so cross this year? I have never known them to sting as they have done this year.

A. We have received similar reports of a like condition all over the white-clover regions. Cold backward summer weather, now a little sunshine with a flow of honey, then rain or cold and no honey, makes a condition that is just right to make bees cross. A sudden stoppage of a flow of honey,

either from the fields or from sources where the bees are robbing, will invariably make them cross. Bees are apt to be cross when buckwheat stops in the middle hours of the day; cross when the nectar has been washed out of the blossoms; cross on a cool or chilly day; cross when the basswood flow suddenly gives out; cross right after a rain when the nectar has been washed out of the blossoms; cross on a cool or chilly day following a day of warm sunshine when plenty of nectar was coming in. A cool atmosphere is apt to check the supply of nectar.

W. C. F., Michigan.—How much honey does it take to make a pound of wax?

A. Experiments show that it requires anywhere from 5 to 20 pounds of honey to make a pound of wax. The latter figure is altogether too high, and the first one is probably too low. Seven or eight pounds would be, perhaps, a fair average. The bees consume the honey; and when they eat lavishly the wax is secreted in the form of thin scales on the under side of the bee's body. It has not been definitely decided whether the secretion of these scales is involuntary or not; but whether voluntary or otherwise, they are doubtless used at the time of the year when they are secreted in comb-building.

G. C. C., Connecticut.—I find that some of my baby nuclei are robbing from each other. For instance, one nucleus will be brought to the verge of starvation, and the other one will have an abundance of stores so that there will hardly be room for the queen to lay. It does not seem to be exactly like robbing, but what it is I do not know.

A. In the A B C and X Y Z of Bee Culture you will see mention made of what is called "borrowing." It is in reality stealing. Sometimes the bees of one hive will go into another one without any resistance on the part of the other bees, fill up with stores, and carry it to their hives. There is no fighting, but just a sort of peaceful transfer of stores from one hive to the other. Sometimes some seasons this quiet way of robbing, stealing, or borrowing is very troublesome among a lot of baby nuclei; and it is not confined entirely to the very small clusters of bees.

J. L. P., Pennsylvania.—I have read somewhere that feeding extracted honey to fill out unfinished sections can be practiced to advantage. Would you advise me to feed back at the close of the season?

A. At the present price of extracted honey it probably would be more advantageous to extract the honey in sections, and hold the drawn-out combs till the following season. But if your market shows that comb honey will sell for about twice the price of extracted you will be warranted in feeding back to a certain extent. To do this work it should be taken up right after the main honey-flow. Use white honey the day it is extracted, thinned down, by adding about 25 per cent water by bulk. Very thick honey may need a little more.

Some colonies are much better in finishing

sections than others and you will have to select those that do the best work. The brood-chamber must be contracted so that the queen will keep every comb filled with brood, as otherwise a great deal of fed-back honey will go into the brood-nest. The thinned-down honey should be given just before sundown to avoid too much uproar in the apiary. Not more than two supers of sections should be on a colony at a time. As soon as the top super is full it should be removed and a fresh super placed next to the brood-chamber.

It is always well to remember that fed-back honey always granulates quickly. It should, therefore, be sold where it will be consumed at once. It should never be sent to a distant market.

J. E. B., New York.—We do not hear so much about the smoke method of introducing now. Has it gone out of vogue?

A. Generally speaking, we recommend the cage method; but in the hands of an expert the smoke method has the advantage that queens are introduced at once; and in the case of virgins, three or four days old it is the only method that can be employed successfully at times. For particulars regarding this plan see "Introducing," in the A B C and X Y Z of Bee Culture.

L. H. W., Ohio.—This has been a year of excessive rains, chilly and backward weather, but white clover is very abundant. It has been in bloom since the last of June; and at this date, July 16, it looks as if it might last till autumn. I should like to know if white clover will continue to bloom as long as it continues to rain almost every day.

A. Yes and no. During a season like this one, white clover is cropped down by mowing or by feeding in a pasture. But usually clover does not yield much after the middle of July, altho it will probably do so this year, as the season is anywhere from a month to six weeks late.

M. B. L., Indiana.—Do ordinary honeybees get honey from red clover?

A. Red clover will yield more honey during a dry season than during a wet one. The reason for this is that the drouth stops the growth of the flower-tubes so that they are shorter. We remember distinctly one season our bees at the Harrington yard were getting considerable red-clover honey, while those at the north yard, also in the vicinity of red clover, were doing nothing. There had been some local showers at the north yard, but none at the Harrington yard. The result was that the growth of red clover was stunted at the Harrington yard. All Italian honey-bees will gather nectar from a second growth.

Some seasons red clover would be the most valuable honey-plant we have, provided we could lengthen the tongues of the bees or else shorten the flower-tubes. Not very much advance has been made either way, altho we have had bees with tongues at least a half longer than the average.

HEADS OF GRAIN FROM DIFFERENT FIELDS

Knitting

BY GRACE ALLEN.

Knitting—I, whose awkward hands have never knit before,
Putting needles in and out and thread around and o'er—
But oh I think such blinding thoughts of battles overseas,
Knitting here where summer air is murmurous with bees.
Knitting with a soft white thread, but oh how can I say
What tragedy of crimson stain it soon must wipe away—
What bitter need of pads and wipes and bandages and socks—
Knitting here today beside my tall pink hollyhocks?
Knitting, knitting—all we women, thru this stern July—
Tell me, what is sending all our young men out to die.
Is it righteousness, and vision? (how the roses nod!)
Is it something deathless in our hearts that we call God?
If the roses could but answer! If the bees could only say!
But roses keep their silences and bees their ancient way.
Knitting, knitting—but, dear God, while men die overseas,
Have I a right to roses and pink hollyhocks and bees?

Questions on Three Dr. Miller says, Sept.
Plans for Comb- 15, 1915, p. 746, that
honey Production the Fowls plan, July
 15, 1915, p. 574, won't

do for comb honey. Mr. Doolittle, Aug. 15, 1915, p. 661, gives a plan which seems to be about the same thing for comb honey. From the last four or five lines I judge the bees will start queen-cells after the hives are reversed.

1. Are these plans alike? If not, please explain the difference.

2. Will bees start queen-cells above an excluder with or without supers between?

3. What is the reason for the following statement which I have often read, but never understood; viz., that you cannot push back the second story a little and the third story forward to allow a current of air to pass thru all three, when running for comb honey?

4. When using the shaken-swarm plan without increase, for comb honey, would it be practical to hive on empty combs and extract if the bees stored in the brood-chamber, or would this require a good deal of looking-over of those shaken on to combs that way?

5. If I placed a hive of brood without bees over a colony, with a super of sections and an excluder between the two hives, and left the brood on top ten days, would the bees go up and start queen-cells?

6. Would they, as the brood hatched,

carry the honey up there if the super had only foundation and six or seven "drawn" sections ("baits")?

7. I am trying to develop a plan when I have 50 colonies or more to use some sections, but mostly shallow extracting-supers, for bulk comb honey and extract a little to fill up the pails with. Please advise me a good way to do it, with no increase. We have good early fruit bloom, crimson clover, and eight weeks of white clover. Last year one hive made 112 sections.

Lincoln City, Neb.

C. A. Cotell.

Miss Fowls, to whom we submitted the above, replies:

Altho we have raised quite a little comb honey in the past, still at present we are engaged almost entirely in the production of extracted honey, and therefore do not consider ourselves authorities on the former subject.

1. From the little that Mr. Doolittle has given of his method, Aug. 15, 1915, p. 661, I should say that the two plans are decidedly unlike. Twenty days before the honey-flow he puts on a second ten-frame story of combs with queen-excluder intervening. At the beginning of the season he reverses the hives, putting a case of sections above the queen and excluder. Ten days later he shakes seven of the upper combs and sets the upper hive on the new stand.

Our plan is this: Whenever capped cells are found, they are torn out, leaving the uncapped ones; and the hive is replaced with one of foundation or empty combs, one of the central frames being exchanged for a frame holding the queen and a small patch of unsealed brood. Above this is placed the excluder and two full-depth or three shallow supers of empty combs, and, on top of all, the old hive of brood. Then at the end of seven or eight days the upper story is moved to a new location.

We understand Mr. Doolittle's plan is applied twenty days before the season opens, quite regardless of the presence or absence of any swarming tendency, while ours is used only in case of capped cells. He has only one shallow super intervening between the hives of brood while we have at least three. In his lower story the brood-nest is not started at all, and he might also have quite a little honey there, to both of which conditions we would object. But, above all else, I would call attention to the fact that neither his old nor new swarm is in a natural condition. Our attempt has been to follow nature as closely as possible. For this reason we would strongly object to shaking bees from that upper story, as it would leave the old swarm so weakened that there might be danger of chilling the brood in case of a cool night, and it would also leave many young bees with the new swarm—a state

that is quite unnatural, and which might very easily cause swarming.

Of course I realize that, if we were to raise comb honey, our plan would necessarily be changed. Just what changes we would need to make it is hard to say, as we have raised but little comb honey since adopting this method. Moreover, I have no intention of criticising Mr. Doolittle's plan, since it is one that we have never tried; but I do know that, if we were to alter our method for the purpose of raising comb honey, we would try to keep the old and new swarm in as nearly a normal condition as possible. And we certainly would not shake, as we have already tried that plan in a comb-honey apiary and discarded it long ago.

2. I suppose you mean if cells were already started in the brood-chamber. Well, I would answer this if I were not so much afraid of Dr. Miller.

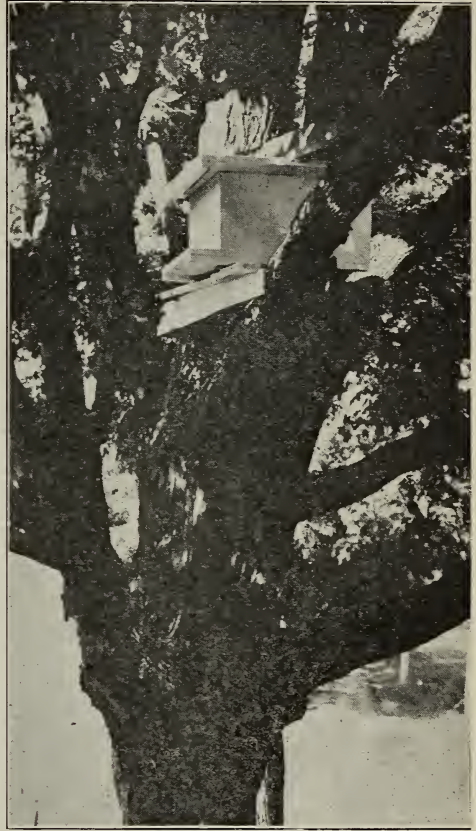
3. This would be too cool an arrangement for comb-building at night. The heat rising from the swarm would escape thru these openings.

4. A good queen would occupy enough combs so that it would not be necessary to extract from the brood-chamber.

5. Probably. Especially if they already had the swarming fever.

6. Yes. They would naturally prefer the comb and also the warmer place for storing.

7. Whoever answers this last question satisfactorily ought to have a medal. However, any up-to-date comb-honey man could doubtless give some valuable hints on the subject; in fact, back volumes of the bee magazines have quite a little along this line; and also Dr. Miller has written this up very fully in his Fifty Years Among the Bees.



Hive located in a tree to catch any stray swarm.

When an Old Hive is Better than a New One

In 1914, having just moved, I spent the first season in 35 years entirely without bees. The next June I started with bees again in a small way, and then decided to try catching some stray swarms. I put a hive up among the branches of a large maple-tree, but it showed no bees for so long that I was almost discouraged. Then one day, Aug. 15, as we were closing our noon meal, my wife remarked, "Your bees are swarming!" I said, "No, not mine, for I always remove queen-cells and put the new colony on the old stand and never have any after-swarm." We went out just in time to see the air black with bees, and a fine swarm alighting on the hive in the tree. They built up in good shape, and that fall we packed them for the winter between two much stronger colonies.

When we arrived from the South. May 1. I found this hive contained nice clean combs and plenty of honey but no bees. As the other hives were very close I decided that these bees had doubtless drifted into the larger swarms. These combs I changed to a

new hive, thinking they would give a fine start for my first prime swarm. The old hive I saved for catching another stray one. On June 10 we caught another, shook them into a new hive, and again replaced the old hive in the tree.

In this way the same hive is used repeatedly, and I much prefer the old hive to a new one, for the wax about an old hive attracts the bees much more readily.

Three Rivers, Mich.

M. L. Brewer.

Overheated Brood and other Matters

Referring to the conditions mentioned by Ira J. Monroe under

Heads of Grain, in Nov. 15th issue, I may say that I have experienced similar trouble. In the bright sunlight of a summer day I examined all my colonies, being careful, as I thought, not to expose them to injury from excessive heat. However, the next day the bees began bringing out nearly mature brood, and I saw many pale weak-looking bees, apparently just hatched. These were struggling feebly from the hive or else were being carried out half alive. This continued

for a couple of days, and I also found dead brood in the cells. I diagnosed my trouble as overheating, altho I had frequently manipulated frames under identical conditions without any after-effects.

Last season I averaged only 50 pounds per colony. I produce extracted honey, but cut the comb from the frames into long strips, fitting four pieces into a pound jar and filling the remaining space with liquid honey. This I market locally under the label "Pure Florida Chunk Honey."

Miami, Fla.

G. A. Ormerod.

Alfalfa on Light
Land Yields Well in
a Dry Season

In the editorial on page 171 for March the editor says that alfalfa in a dry season on light land will yield honey when in a wet season on heavy land it will fail to do so. I have had a grand opportunity to note this very thing the past two seasons here in the South Platte Valley, Colorado.

The season of 1915 was very wet, and the bees gathered but little nectar from alfalfa, 1916 was quite dry, and the bees worked well on the alfalfa on light and heavy soils alike.

In 1915 the bees worked wonderfully on sweet clover. Thus it is next to impossible to have a total failure here—not one in fifteen years.

The 1916 crop had a much better body and flavor than the 1915 crop. My customers reminded me of this.

C. E. Crofoot.

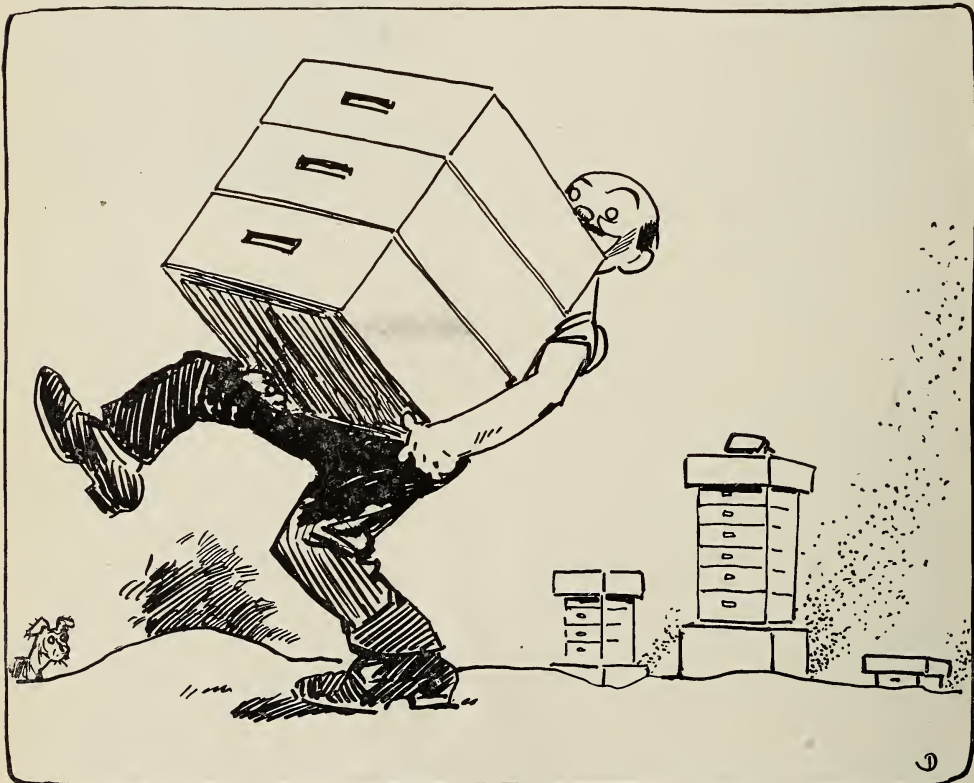
Crook, Colo.

Dandelion
Honey

During the last ten days of May, 1916, my six colonies stored 150 sections—in fact, so much that the queens were honey-bound. This must have been dandelion honey, as there were no other blossoms at the time and the odor around the hives was distinctly that of dandelion. The honey was golden in color, and the flavor and body were excellent. The flow seemed to be the result of a month of rain followed by warm clear weather. Contrary to the experience of Mr. Crane, page 359, May, this honey did not granulate, the last of it not being sold until ten months after it was gathered.

Palmyra, N. Y.

G. H. Parker.



THE BACKLOT BUZZER

BY J. H. DONAHEY

Jerry Juniperberry says he ain't braggin' but up this way the travel is so congested on account of the heavy honey-flow that the bees had to put traffic cops on at the entrances.

with prospects of from 10 days to 3 weeks of honey-gathering from that source. If weather conditions favor, crop may be nearly normal.

NEW JERSEY.—No crop yet harvested (July 12); prospects of 20 pounds per colony on the average in sight; no offers for honey reported.

KENTUCKY.—Crop good, eight or ten days of clover still in sight; jobbers are offering 12 cts. for extracted, 15 cts. comb.

PENNSYLVANIA.—No honey crop yet (July 20) harvested; white clover failed to yield, some colonies starving during clover bloom; some sumac coming in; prospects for buckwheat in central Pennsylvania good because of large acreage; no honey for sale, so no quotations.

The eighth annual field meeting of the Connecticut Beekeepers' Association will be held at the Connecticut Agricultural College at Storrs, Conn., on August 9 and 10.

The Panhandle Beekeepers' Association will hold its summer meeting on Aug. 22 at the apiary of A. J. Yahn, Triadelphia, W. Va. Some notable speakers are expected to be present.

At the next annual meeting of the Illinois State Beekeepers' Association, Nov. 14 and 15, at Springfield, gold and silver medals and cash prizes are to be awarded on exhibits of both comb and extracted honey. James A. Stone, Secretary, R. D. 4, Springfield, Ill., will furnish details.

The Superior Honey Co., Ogden, Utah, reported in early July that the prospects were then very good. The winter loss in that part of the country was heavy, but package bees to the number of about 2000 packages were received in Utah and Idaho to make good the winter losses.

The Texas State Beekeepers' Association will meet in conjunction with the Farmers' Congress as usual this summer on August 2 and 3 at the A. and M. College, College Station. Pres. E. Guy LeSturgeon will preside at the Association meeting. A meeting of exceptional profit is expected. A special invitation has been extended by the secretary of the Farmers' Congress that the beekeepers furnish an exhibit of bees and apiarian products. M. Faulkner, Waco, Texas, is secretary of the Farmers' Congress.

The annual meeting of the Eastern Massachusetts Society of Beekeepers, formerly the Massachusetts Society of Beekeepers, organized in March, 1916, was held in Boston on April 7. The officers chosen are as follows: Pres., S. Lothrop, Davenport, Instructor in Horticulture at the Independ-

ent Agricultural College, Hawthorne, Mass.; Sec., Mrs. Goodnough, 1702 Center St., West Roxbury; Directors, Mrs. Susan M. Howard, Wakefield; Mr. Benjamin P. Sands, Brookline, and Mr. Clarence Boylston, Milton. The annual field day will be held on Saturday, August 11, at the Independent Agricultural School at Hawthorne. The announced speakers are: the President, Allen Latham; Arthur C. Miller, O. F. Fuller, E. R. Root, Chas. Stewart (State Inspector of Apiaries, of Johnstown, N. Y.), Hon. Wilfred Wheeler (Secretary of the Massachusetts State Board of Agriculture), and F. A. Smith.

The New York State Association of Beekeepers' Societies will hold its summer meeting and picnic on August 3 at the apiary of S. D. House, Camillus, N. Y. The object of the summer meeting will be principally to get an idea of what the honey crop is and what the price of honey ought to be.

The Western New York Honey Producers' Association will hold its annual field meeting and basket picnic on Saturday, August 11, at the apiary of J. Roy Lincoln, on the Saunders Settlement, or Niagara Falls-Lockport Road just out of the city of Niagara Falls.

Mr. H. C. Klinger, secretary of the Pennsylvania State Beekeepers' Association, writes that more than 100 demonstration meetings for beekeepers have been held thruout the Keystone state under the supervision of the State Department of Agriculture. He adds that every part of Pennsylvania is being aroused to the possibilities in beekeeping.

The Tupelo Honey Producers' Association was organized on May 15 at Wewahatchka, Florida. This Association represents the tupelo honey-producers of both Georgia and Florida. J. J. Wilder, of Cordele, Ga., was elected president, and J. R. Hunter secretary-treasurer. A committee was appointed to consider a plan for the organization of packing plants and a selling exchange to handle the 1918 crop of tupelo honey. The 1917 crop had been practically sold as early as the middle of May. Those taking part in the organization of this new association represent about 15,000 colonies of bees.

The annual picnic of the Toronto Beekeepers' Association was held on Empire Day, May 24, in the apiary of the Ontario Agricultural College at Guelph, which is 50

miles from Toronto. The day proved to be cold and showery, and many were discouraged by the unfavorable prospects. However, about 45 people came, bringing their picnic baskets. There were speeches and a general good time socially. The subject in which greatest interest was taken was that of containers for the prospective honey crop. Paper and fiber containers were discussed and samples shown, but it was pointed out that, for shipping, the honey would need to be granulated, and the public would need to be educated to its use. That is the principal difficulty in the use of paper containers—the fact that the people do not buy granulated honey as readily as they do the liquid form.

The annual field meeting of the Chicago Northwestern Beekeepers' Association will be held on Tuesday, August 14, at the home apiary of the president of the association, Mr. E. S. Miller, at Valparaiso, Ind. Preparations for a good program (including a good dinner) are already made. The Miller apiary is located about a mile east from the railroad station of Valparaiso, but Mr. John C. Bull, secretary-treasurer of the association, will see that transportation is waiting all in-coming trains till noon. Valparaiso is located 44 miles southeast of Chicago on the Grand Trunk, the Nickel-plate, and the Pennsylvania railroads. Call phone 571R for information concerning the meeting and transportation on arrival in Valparaiso. President E. S. Miller is the man who operates 400 colonies of bees in five yards, working an average of two days a week. He will show and explain his system of management.

Mr. Collin P. Campbell, president of the Michigan Beekeepers' Association, writes that the legislature of his state doubled the appropriation for foul-brood inspection and that the work is progressing very satisfactorily. He adds that Mr. Kindig has proved to be very energetic as an inspector and has two good assistants at work. Mr. Campbell believes that the next legislature, in view of the results that will be shown by increased inspection work, will give the beekeeping cause all the money that can be efficiently used.

A very successful field meet of the Northwest Missouri Beekeepers' Association was held on the morning of July 4 at the apiary of J. W. Romberger, located in a wooded pasture in the edge of St. Joseph, Mo. This association is a branch of the

State Association, composed of 35 members. It is unique in that it meets the first Monday evening of each month instead of meeting only once a year, as is the case of most associations. One speaker each evening gives in detail his methods of handling some phase of beekeeping. The rest of the evening is given over to a general discussion of the subject and to a question-box. Monthly meetings enable the beekeepers to bring their perplexities before the association for discussion while they are still fresh. The meetings are held in the county courthouse at St. Joseph.

An all-day summer meeting of the Pennsylvania Beekeepers' Association will be held at the apiary of L. K. Hostetter, five miles northeast of Lancaster, Pa., on August 16. All persons interested in bees are cordially invited to attend this summer meeting.

An enthusiastic field meet was held at the apiary of Chas. P. Johannigmier, Granite City, Ill., on July 12. It was the first meeting of the kind ever held in that locality. A. L. Kildow, State Inspector of Apiaries, and Deputy Inspector Withrow were present.

Mr. C. L. Sands, of Madison County, N. C., has been appointed beekeeping specialist in the Entomology Division of the State Department of Agriculture of North Carolina. He works under the direction of State Entomologist Franklin Sherman.

The Pennsylvania State Beekeepers' Association meeting was held at Dr. Sterner's apiary, Wrightsville, on July 7, and was largely attended. Geo. H. Rea and the host were the principal speakers on the occasion.

The Ramsey County Beekeepers' Association was organized at a meeting held at the University Farm of Minnesota in early June. The officers hope to secure a membership of 1000 beekeepers.

The field day of the Ohio Beekeepers' Association will be held on Sept. 6 and 7 at Wilmington. An exceptionally interesting program is expected.

The field day of the Rhode Island Society of Beekeepers will be held at Rhode Island State College, Aug. 4. An excellent program has been prepared.

THERE has been a great scarcity of potatoes for seed in this region. Finally our town people here in Medina succeeded in getting a carload of "Rurals" from some place in Michigan, and it was my privilege to get a few of them. As they did not get here till toward the last of June, I

was in a hurry to get them planted. Well, in this locality it not only rained almost every day, but sometimes "two times" in a day. The potatoes were nicely sprouted (by being spread out in the sun, while getting the ground ready), and I did not want to trust anybody else to cut them to one eye, and properly place them in the furrow without knocking the sprouts off.

By the way, between our place and that of our nearest neighbor there is a vacant space that has been allowed to grow up to grass clear out to the street. Mrs. Root has always objected to having farm crops put on this piece of ground. She declares green grass—at least a certain amount of it—is as ornamental about the home as expensive flowers—at least she thinks a nicely kept lawn should go with the flowers to set off their beauty. Well, for the first time, she has (yielding to the call of the President) said I might plant *potatoes* on that spot. So we turned under the heavy sod and got the ground nicely fitted and ready to plant. But it kept on raining—not very hard, but a sort of drizzle. The thermometer was close to 80, and it was just the time that the potatoes should be in the ground. I rigged myself up in some old clothes and was dropping my potatoes in spite of the rain. Pretty soon a young fellow came along doing some work on the wires for the electric company. He, too, was working out in the rain because, as I presumed, the work was urgent. It was somewhat of a question which one of us looked the more respectable, for he, too, was pretty well covered with mud from digging up poles that were to be moved elsewhere. Something was said about working out in the rain. Finally he eyed me over from head to foot and then propounded the following question:

"By the way, stranger, who are you working for, anyway?"



Him only shalt thou serve.—MATT. 4:10.
Seek ye first the kingdom of God and his righteousness.—MATT. 6:33.

And every one that hath forsaken houses, or brethren, or sisters, or father, or mother, or wife, or children, or lands, for my sake, shall receive a hundredfold, and shall inherit everlasting life.—MATT. 19:29.

Before I could answer I began to consider the matter as I looked at him smilingly. Then he went on:

"Are you working for the company?"

"What company do you mean, my young friend?" I replied.

"Why, are you working for the Root Co.?"

I smilingly told him I *guessed* I was, at least part of the time.

After he went on with his work I went on with mine, dropping potatoes. But the words kept ringing in my ears, "For whom are *you* working?" I tried to put them away and think of something else. But the question kept following me all day and into the night—"Whom are you working for—self and selfish interests? or are you working for God and your neighbors?"

I looked up at the stars and stripes that are floating every day in the wind from the flagpole on the fire-reservoir—the highest point on our buildings. Once more:

Am I working for A. I. Root or for the A. I. Root Co.? A. I. Root is not going to last many years, and may be not many months. The A. I. Root Co., God permitting, may last for years after A. I. Root himself is gone. The potatoes I am planting may, part of them, be for A. I. Root individually; but if we have any kind of yield, by far the greater part of them will help to save the life of the A. I. Root Co. Or they may be sold and help nourish humanity at large.

My good friend, you whose eyes rest on these pages, whom are *you* working for? Are you working for self, or are you considering humanity during these war times? Are you working for the good and future welfare of the children of your neighborhood or state or nation? Are you considering the unborn children? Are you planning and working for the benefit of posterity? Are you doing what you can to protect the coming generation from the devastating influences of strong drink? If you are old, like myself, are you ever tempted to say or think, "Well, there is no use in letting so much responsibility rest on my shoulders—the younger people may take care of it to

suit themselves?" May God forbid that you or I should tolerate the thought.

Our text reads, "Him only shalt thou serve." I might have told the young man that I was working for God and the state of Ohio and for America, and the whole wide world as well; but I did not think of it then.

I have told you already, perhaps several times, what I said as I stood up in a union meeting at the Methodist church here in Medina nearly fifty years ago. Billy Sunday was not born at that time; but, as we are told, "coming events cast their shadows before," I hope a little of his shadow fell over me, at about that time. I stood up for the first time before the people of our different churches and declared that from that day and hour, God helping me, my principal work should be first and foremost for Christ Jesus, and for A. I. Root secondarily. I have tried in my poor feeble way to live up to that pledge for almost fifty years. I never thought of it before until that young man asked me for whom I was working. And then it came to me just last evening at our prayer-meeting that somebody said in God's holy book, "Him only shalt thou serve;" and then I remembered also that precious text that has been a comfort for almost fifty years, "Seek ye first the kingdom of God and his righteousness, and all these things shall be added unto you."

I have told you before that business did not suffer when I put Christ Jesus first and foremost. I began at the time hunting work for the numbers in our town who were out of a job. Sometimes, as I have told you, I set needy boys and girls to work when I had actually had nothing in sight for them to work at. I went to the Lord in prayer about it, telling him I had started them to work for *his* sake. The business did not suffer. It has grown and spread and multiplied, as you may know; and yet as I look back over the years I am impressed by the fact that all along A. I. Root has had too much prominence, and Jesus Christ not enough. Some good friend (I presume likely he is dead now) once said in the Kind Words department years ago, that it had been his privilege to know my humble self ever since the time when it was pretty much *all* self and *none* of Christ. As time passed, he said he was pleased to note that, altho there still was some self there was also some of Jesus. If I remember correctly he said he was looking forward to the time when it would be *none* of self and *all* for Christ. What does it mean, friends, to work for Christ Jesus? It means crowding out and putting down self.

My good friend Thomas B. Lanham, or "Tom" as the soldiers know him, in the absence of our minister occupied our pulpit a few Sundays ago. By the way, he stands "away up" in the Y. M. C. A. work, and especially the work among the soldiers. He said there was a point in his life when thoughts would occasionally come into his mind, especially when he was tired out, and he could not see much results from his work, that he would get to thinking that it was not much use in becoming *prematurely* old; that he was not appreciated, did not get much credit, and that he might as well take life easier. He said he had enough good sense, however, to recognize very soon that such thoughts came from the prince of darkness away down in his lair in the bottomless pit. He said he was glad to report that he had the good sense at such times to say, "Get thee behind me, Satan."

Once more, dear friends, whom are *you* working for? Is it "me and my wife, my son John and his wife, us four and no more*?" God forbid. Are you working might and main for the boys and girls in your neighborhood? Are you working might and main for these same boys and girls of the state of Ohio in helping to make "Ohio dry"? Are you working might and main that the United States of America just now may stand before the world with an unsullied reputation? Are you working might and main to see the American flag that is now floating, I trust, over or about your home, safely handed down to the children yet unborn, a "stainless flag," that the stars and stripes may be clean and pure before the great wide world? If not, suppose you take that question that has been following *me* day and night and ask *yourself* the simple question which that boy while working out in the rain put to me—"Well, who are you working for, anyway?" And may God give you grace to look up and say honestly, something as I did nearly fifty years ago, "I have been a busy man, friends, all my life, as you may know. I have worked at times fourteen and even sixteen

*Toward the close of the 12th chapter of Matthew we are told that during Jesus' talk to the people some one told him "his mother and his brethren" were without and desired to speak with him. If I remember correctly we are told elsewhere that they feared he was wearing himself out with his incessant labor. Without stopping his sermon he paused long enough to say, "Who is my mother, and who are my brethren?" Then he stretched forth his hand and waved it over the multitude saying, "Behold my mother and my brethren; for whosoever shall do the will of my Father in heaven, the same is my father and sister and brother."

In the 10th chapter, toward the close, we read, "He that loveth father or mother more than me is not worthy of me; and he that loveth son or daughter more than me is not worthy of me. These family ties are all right; but we should constantly keep in mind that our Lord and Savior should come first, and be held up above all and *over* all.

hours a day, and I expect to be a busy man still; but, God helping me, from this day and hour my work shall be first for Jesus Christ, and self shall be second."

Not many hours ago I listened to a most beautiful hymn sung by a young girl who is crippled for life. There is no hope that she will ever be able to get anywhere without the use of crutches. She comes from the Schaufler Home, in Cleveland—a charitable institution. She is anxious that she may, by the use of her voice, obtain a livelihood and not be dependent on any. I told her about the boy I met out in the rain and of the question he asked me. Said I, "My

young friend, are you willing to dedicate that beautiful voice of yours to Christ Jesus and trust *him* to take care of the outcome?"

Her face lighted up, and at once with a glad smile she replied:

"Yes, YES, Mr. Root, that is it exactly. That is what I am doing and expect to do."

Now, friends, if a poor crippled girl is so ready and willing to dedicate and give all she has in this world for Christ's kingdom, can you not do as much, and pray for that glad time when Christ's kingdom *shall* come, and *his* will be done on earth as it is in heaven?



A FIELD MEET OF THE GROCERS OF THE CITY OF AKRON.

As our honey is mostly handled by grocers, and as it is also quite desirable that the grocers should know as much about the bee business as possible, the Akron grocers were invited to make a visit to our apiary, where they had a lunch of biscuit, butter, and honey. Just before the lunch your humble servant was invited to give them a talk; and this talk was substantially the same as the Home paper in this issue. After the Home talk I gave them a brief account of my first start in bee culture, which has already appeared at various times in these pages. The grocers brought along their wives and children, and I believe they had a very pleasant time. There were something like fifty automobiles to bring the crowd to our place from Akron, twenty miles away.

The building in the background is the garage where the automobiles belonging to the company are kept in order. You can get a glimpse of the evergreen trees that were planted for a windbreak toward forty years ago. The limbs were originally allowed to come clear down to the grass in order to form a windbreak; but these up near the buildings have been trimmed off so as to permit automobiles to run over the lawn.

HIGH - PRESSURE GARDENING

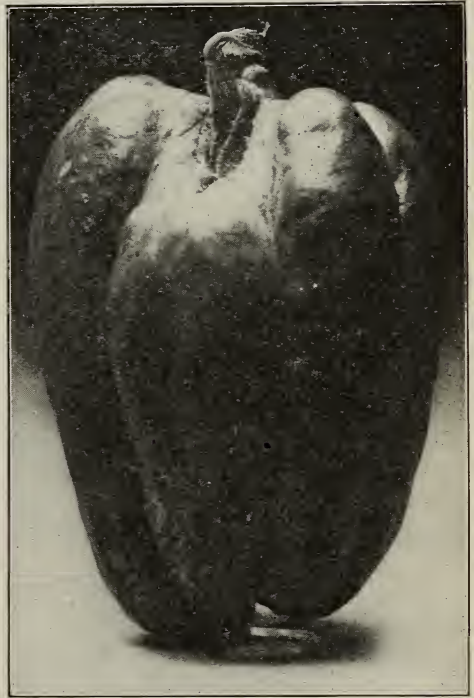
THE CHAYOTE, A WONDERFUL NEW VEGETABLE
TO HELP US OUT ON THE HIGH COST OF
LIVING.

Some time about the first of the year I saw a notice in the Jacksonville *Times-Union* of a new, delicious, and nourishing vegetable called the "chayote." The vine looks much like that of the cucumber; but it stands over every year, or at least it does in California, and grows best on a trellis, something like a grapevine. The fruit, or squashes, or whatever you may choose to call them, are about the size and shape of a large pear; and the bulletin sent out by the Department of Agriculture in regard to it gives more than a dozen different methods of preparing dishes of the chayote. I at once applied to the Department of Agriculture, and in response received four fruits, or whatever you might call them. Now, this chayote, instead of having a lot of seed like a squash or cucumber, has only one large seed, right in the center. This seed looks like an enormous lima bean. Imagine a lima bean about as large as a small hen's egg, and then you have it; but instead of planting this bean, or seed, you plant the whole fruit; and if the fruit is not used right away when it comes to maturity it sends out roots and sprouts like a potato. The four fruits I received were already sprouted; and after being planted according to directions they were up and growing in less than a week. When we had that severe frost the first of February I saved them by covering them with empty sacks. The instructions given us say the plants should be from 15 to 20 feet apart; and the trellis had better be made overhead so the fruit will hang down, say high enough so that we may pick them handily.

Now hold your breath while I give you a most important fact in regard to this wonderful chayote. The government bulletin said a single vine, if properly cared for, would bear from 400 to 500 fruits in a year. When I left Florida, the last of April, one of the chayote-vines had got to the top of the trellis, and was climbing out overhead at the rate of several inches a day. An expert sent out by the Department took a kodak picture of my vine and gave me the astounding intelligence that single vines had already produced the astonishing number of over 1000 fruits in a year. The bulletin sent out said they would be fit to pick in September; but I was happily surprised to get notice from Wesley that my vines already had fruits ready to pick.

Bear in mind they are to be picked before they become mature, like cucumbers, summer squashes, string beans, etc.

Well, today, June 4, we have just had our first meal of the four specimens of the chayote sent us by mail. Mrs. Root is a little more careful than I am; in fact, she claims that she can tell before the test is made how new fruits, vegetables, etc., will turn out, for I am so anxious (she says) to get hold of something new and wonder-



A PICTURE OF ONE OF THE CHAYOTE FRUITS.

I am sorry I did not think to weigh or measure it; but it would pretty well fill an ordinary tall quart cup. Please notice the little plant shooting out near the stem. If I am correct, if the fruit is not gathered it will commence to grow like the above while on the vine. It is now planted out by the wire fence surrounding our poultry-yard; and while it may climb to quite a distance before frost, I hardly think we shall get any fruit here in Ohio, as it was not planted till the last of June.

ful that I am almost sure to say it is the "most delicious food I ever tasted." Well, this time she is the one first to pronounce it a really good vegetable. As I did not bring the directions with me, out of the dozen or more ways to prepare the different dishes of chayote we tried only steaming them as we do our summer squash. By the way, the *Times-Union* gave a picture of a trellis somewhere in California where the woman

who owned it made her living by selling the chayotes that were ready to pick every day from just one single vine.

Yes, it is true that I have been enthusiastic about a good many new things in years past that did not amount to very much after all; but several times I have been right about it. I was one of the first to recommend winter lettuce, and the first to introduce the Grand Rapids and to give it its name; and now it is a great industry (winter lettuce) almost all over the world—especially lettuce under glass; and the same way with celery and the dasheen. During the present great scarcity of food the dasheen, at least in the South, is coming to its own. In the course of four or five years I really expect all the northern seed-catalogs will "sit up and take notice," that dasheens can be grown profitably all thru the North.* From the fact that chayote will bear fruit (at least in Florida) in less than 100 days after the seed is planted, I do not see why they cannot be grown here in the North as well as in Florida and in California. At present I have not seen any seeds or fruits advertised for planting, in any of the Florida papers; and I do not know whether the Department of Agriculture is now prepared to furnish fruits for planting or not. I think, however, they will send information in regard to the plant on application. Address Plant Introduction, Department of Agriculture, Washington, D. C.

Since the above was put in print I find the following in the Year Book of Agriculture for 1916:

The chayote (*Chayote edulis*), a little-known vegetable from tropical America, has been successfully grown in a limited way in California, Louisiana, and Florida, and can possibly be grown successfully in other parts of the country where the temperature does not fall much below freezing.

Many of those who have eaten the chayote consider it superior to our summer squash or vegetable marrow. The plant is a perennial vine that is comparatively easy to grow. The single-seeded, pear-shaped fruits, light green or creamy white in color, are produced in quantity in the fall and can then be used or stored and used as a fresh vegetable thru-out the winter.

POTATOES IN SIXTY DAYS.

* I hold in my hand today, July 6, three potatoes the size of good big hens' eggs. They are not an early variety either; but they grew from some late potatoes that I

* In the Yearbook of the Department of Agriculture for the year 1916 a whole chapter of 9 pages is given in regard to the dasheen, with 14 beautiful illustrations. Among the illustrations of different ways of cooking is a picture of the dasheen casserole, stuffed dasheen in the "half shell," dasheen crisps, and rolls made from wheat flour in combination with dasheen. With suitable soil and plenty of water it is an easy matter to get dasheens as tall as a man's head, and from a peck to half a bushel of tubers from a single hill, down in Florida.

found in my son-in-law's cellar when we got back from Florida. The potatoes had thrown out sprouts with some rudimentary leaves. I planted them carefully, and today I find the ground bulging up around the hills. The main point to my little story is this: If you want potatoes extra early, get them nicely sprouted in the cellar or in some better place, with leaves and roots also; and if you plant them out as soon as the weather is suitable, you will be ahead two weeks or more. The principal point now is to devise the best method of getting them thus started in some suitable place. Some kind of rich soil will very much facilitate matters; and I am greatly interested now in getting the very best soil for starting potatoes in the spring before they can be planted outdoors. The best success I have had so far is with old well-rotted poultry manure. Now will somebody who is competent tell us the very best chemical fertilizer to add to this very best "potting soil?" Old well-rotted stable manure, with the proper admixture of sand, is, generally, probably the best thing available.

THE DASHEEN COMING TO ITS OWN.

One of our good friends, Mr. D. V. Fisher, of Omaha, Neb., sends us the following, but does not tell from what paper it was clipped. By the way, we have dasheens growing nicely in our Ohio garden this 27th day of June; and this is the fourth season we have succeeded nicely in growing it here in Ohio. Now here is the clipping. The fellow who wrote it is "some writer." I wish I could give him credit.

THE POTATO IS DEAD; LONG LIVE DASHEEN!

Down with the potato.

Bury it and cover it up. Pan it. Roast it. Bite its eye out.

Dasheen has come to take its place. Dasheen is not a new kind of sand soap, a patented ice-cream freezer, nor a fresh bit of profanity, nor is it a toilet water. It comes in baskets from "the south." "The south" doesn't get it from anywhere. It "just grewed" there.

You cook it like a potato. Eat it like a potato.

It is just like a potato; only that some dasheens are bigger than some potatoes, and some dasheens are smaller than some potatoes. A few dasheens likewise are the same size as some potatoes.

The superiority of the dasheen over the potato lies in the fact that dasheen is a substitute for the potato, whereas a potato is only a potato.

You boil it with or without the skin, which comes already on the dasheen.

The dasheen is boneless.

And it's a mighty fine vegetable, and very timely.

Dashed if it isn't!

"THE LEWIS PUBLISHING COMPANY, OF UNIVERSITY CITY."

The following, clipped from the *Rural New-Yorker* for May 12, explains itself:

Referee in Bankruptcy Coles today ordered the division of \$37,936.75 among 275 creditors of the bankrupt Lewis Publishing Company of University City. Each creditor will receive 1.675 per cent of his claims.

Liabilities of the company were fixed at \$2,211,055.26 when it made voluntary declaration of insolvency. Matt G. Reynolds is trustee.

The above notice appeared in the daily papers of St. Louis on April 17, 1917. The creditors realized a little more than a cent and a half on the dollar. Lewis apparently squandered the 97½ cts. This record should prove interesting to those whom Lewis is soliciting to invest in his new Atascadero, California, schemes.

Some years ago, when GLEANINGS, together with the *Rural New-Yorker*, exposed the tricks of the Lewis Co., quite a lot protested, declaring that Lewis was all straight, and would do all he agreed, etc. From the above you can see how it turned out. With over two million dollars sent him, largely by poor people, of their hard earnings, and mostly women at that, they get back only a cent and a half on the dollar. We might drop the matter right here and call it "spilled milk" were it not for the fact that this same Lewis is out in California trying to do the same thing over again, or, what is worse, that he is succeeding, at least to a certain extent, in doing the same thing over again. Before investing your hard earnings in the future, dear friends, you had better listen to the *Rural New-Yorker*; and if you will not think me immodest I should like to add, listen to your old friend A. I. Root.



HEALTH NOTES

CORN MEAL AND "HIGH COST OF LIVING."

Our readers will recall that our remark on corn meal, page 302, was given with something of a word of caution; therefore we take pleasure in giving the following:

Mr. Root:—Your article on corn meal, page 302, is so misleading that I feel it a duty I owe the subscribers to make a few comments. If you will refer to *Farmers' Bulletin No. 142* you will see that corn meal is not a *balanced ration* (a balanced ration must have about 14 per cent protein, page 48 bulletin), and, when eaten without something to balance, it is dangerous (page 45). Corn meal has only 7.8 per cent of digestible protein (page 28), and requires to balance it about a dozen eggs, 2/3 lb. cheese, 1 lb. beef, or 1 lb. of beans, which, added to the corn meal, makes it much more expensive than oatmeal, which costs but little more, and is already a balanced ration. Children fed on corn meal alone will get sick and stop growing. I have seen it tried. Southern darkies live on corn meal, but they do love chicken, which balances the corn meal. Persons living on an unbalanced ration will soon crave something that balances their ration. Everybody should have bulletin No. 142 and study it, if they wish to economize and still be healthy.

Hamilton, N. J., April 21. C. E. FOWLER.

FERTILE EGGS FOR HATCHING.

On page 219 of our March issue I mentioned taking six dozen eggs down to Florida, and that I got only 18 chicks from them; and I said there were two reasons for the poor hatch. First, some of them were a month old or more; second, I carried the six dozen eggs in my grip over a thousand miles. Well, in order to test the matter a little further to see where the trouble lay, about the last of April I put 20 more fresh eggs in my grip, packed in bran as before. The eggs carried safely, and only one was broken, and that by accident after it reached Medina. The 19 were put under two hens, and every egg showed strong fertility. From the 19 eggs I got 18 nice strong chickens; and yesterday, June 5, every chicken was pretty well feathered out, and strong and healthy. This morning I found one dead, without any apparent reason. But I feel pretty well satisfied with the experiment after all, for it demonstrates conclusively that strictly fresh eggs will bear long shipment all right if properly packed, but that it is poor policy to undertake to get chicks from eggs over a month old. One more point is that the Eglantine strain of White Leghorns—at least so far as my experience goes—give eggs of remarkable fertility. Nineteen fertile eggs out of twenty is pretty good; and if the one had not been broken by accident, very likely every egg would have proven fertile.

Perhaps I should add that it is pretty generally accepted that corn meal alone is not a safe food for chickens—especially very small ones. If the chickens, however, have a run outdoors they might get along very well. But years ago, when our young chicks died in considerable numbers, it was generally agreed that it was because they had too much corn meal, or an exclusively corn-meal diet, when they were quite young. Notwithstanding all the above, however, I think many people and many families would not only save money but have better health by using considerably more corn meal in some shape than they have been using.

VEGETABLE BUTTER AND COWS' BUTTER; BY A SOUTHERN MAN WHO CAN SPEAK FROM BOTH SIDES OF THE QUESTION.

Mr. A. I. Root:—I have just read your article on page 301, April issue, about the "high cost of" butter. I see you have been deceived by the oleo people with their one-sided statement of the case. Being a Southern man, and making for sale cotton-

seed, peanuts, and butter, I think I am in position to see both sides of the matter.

In the first place, butter is not high, relatively. It has far less purchasing power now than a few years ago. Then I could take a pound of butter to the store and pay for ten pounds of flour or two pounds of ham; now it will pay for only five pounds of flour or less than a pound and a half of ham. The oleo people have been flooding the country and besieging congress with just such appeals to make it appear that they are great friends of the Southern farmer, when the fact is that the amount of peanut and cottonseed oil used in oleo is very small compared with that used in shortenings and for other purposes. I think, if you will investigate, you will find that the amount of vegetable oil used in oleo would not justify Dr. Kellogg in using it as a vegetable product.

The manufacturers have the privilege of making and selling all the oleo they choose without paying the ten-cent tax *provided* they do not color it in imitation of butter and sell it as such—but will sell it for what it is. The poor man also has the privilege of buying all he wants without paying the tax; but he does not want to get that when he thinks he is getting butter. Uncolored oleo has only a nominal tax, the larger tax being only for the purpose of preventing its being colored and sold as butter.

Properly made of wholesome materials, o'eomargarine is a perfectly wholesome and legitimate product; but when colored and sold in imitation of butter, it comes into unfair competition with the dairyman who has to contend with the constantly increasing cost of feed and labor. Mill feeds which sold a few years ago for \$1.50 per hundred now bring \$2.50; and cottonseed meal (one of our best and most popular dairy feeds) sells for twice what it did.

Besides all this, the constantly increasing dairy industry of the South is far more important than the small amount, comparatively, of vegetable oils used in oleo.

The tax does not seem to have hurt the manufacturers or the Southern farmers, for we have gotten as high as \$1.00 per bushel (30 lbs.) for our cottonseed this winter, and peanuts have sold well. The latter, however, are controlled by a trust, and are not as high relatively.

The oleo manufacturers' professions of interest in the Southern farmers reminds me of the express companies' concern for the country merchants in the parcel-post matter.

I cannot close without expressing my appreciation of your splendid articles in GLEANINGS, and the noble work you are doing in preaching right living.

RICHARD B. HUNTER.

Arcola, N. C., April 4.



TEMPERANCE

"WAR-TIME PROHIBITION."

This institution, comprising some of our best and greatest men, headed by Prof. Irving Fisher, sends out the following report:

To the Editor:—The Connecticut Manufacturers' Association, representing over 200 of the leading manufacturers of that state, passed a resolution favoring complete war prohibition by a vote of 176 to 1. That was remarkable.

The American Medical Association, the most representative body of its kind in the world, at its national convention in New York this month adopted resolutions declaring alcohol to be neither a food nor a stimulant. That was remarkable.

The National Conference of Charities and Correction violated its custom of passing no resolution on a controverted subject, and, recognizing the patriotic character and overshadowing importance of the question, unanimously adopted the resolution appearing in the enclosure. That was remarkable.

Will it seem over-presumptuous to suggest that these three remarkable events in the field of commerce, science, and social health and morals, are worthy of editorial comment?

W. G. CALDERWOOD,

Washington, D. C., June 14. Executive Secretary.

MORE "RIGHTEOUSNESS" AND LESS "IN-
IQUITY."

The *National Stockman and Farmer* very appropriately gives place to the following boiled-down self-evident truth:

Speaking of the need of the suppression of the use, sale, and manufacture of intoxicating liquors thruout the United States the Pomona Grange of Delaware County, Ohio, in a petition says:

"We are for more beef, beans, bread, and butter,

and less beer, booze, and bums; more wheat, wealth, and wisdom, and less whisky, waste, and want; more milk, molasses, and money, and less malt, misery, and meanness; more apples, alfalfa, and amity, and less ale, ailments, and animosity; more rice, rye, and reason, and less saloons, sin, and suffering; more dress, dainties, and dishes, and less distilleries, drunkards, and disturbances; more beets, barns, and business, and less breweries, brawls, and burials; more sheep, swine, and sugar, and less sherry, sham, and shame; more potatoes, pumpkins, and peaches, and less port, punch, and poison; more corn, cabbage, and cheese, and less champagne, chaff, and cheat; more harmony, homes, and heaven, and less hofbrau, havoc, and hell."

THE SIXTY MILLION BUSHEL OF GRAIN USED BY THE BREWERS EVERY YEAR.

From the *Methodist Temperance Bulletin* I make two clippings. Below is the first one, from Dr. Wiley:

Dr. Wiley, the pure-food expert, recently said, "American distillers use enough grain every year to feed one-eighth of the American population." A startling fact.

Here is what the brewers have to say. While reading it, please keep in mind what a parade they made some two years ago about the grain they purchased from the poor farmers:

The brewers say all the food value of the grain reaches the people in the beer; all of the food value of the grain and more reaches the cattle in the refuse; the grain used in making beer is not fit for anything else anyhow, having no food value; and in the last place they don't use any grain to speak of in the first place.

Classified Advertisements

Notices will be inserted in these classified columns for 25 cts. per line. Advertisements intended for the department cannot be less than two lines, and you must say you want your advertisement in the classified columns or we will not be responsible for errors.

HONEY AND WAX FOR SALE

Beeswax bought and sold. Strohmeyer & Arpe Co., 139 Franklin St., New York.

FOR SALE.—Light-amber extracted honey of good flavor, ripened on the hive. Write for prices and sample. J. W. Potts, Gunnison, Miss.

FOR SALE.—5000 lbs. finest new clover honey in 5 and 10 lb. pails in shipping-cases. Will be sold to best bidder or bidders. How much do you need? R. C. Wittman, St. Marys, Pa.

FOR SALE.—Raspberry, basswood, No. 1 white comb, \$3.00 per case; fancy, \$3.25; extra fancy, \$3.50; 24 Danz. sections to case, extracted, 120-lb. cases, 15 cts. per lb. W. A. Latshaw Co., Clarion, Mich.

RASPBERRY HONEY.—Was left on the hives until thoroly ripened by the bees. It is very delicious. It is put up for sale in 60-lb. tin cans. Price \$9.00 a can; 1-gal. cans of 12 lbs. net weight, \$2.00 each. Sample by mail 10 cts., which may be applied on any purchase of honey. Elmer Hutchinson, Rt. 2, Lake City, Mich.

HONEY AND WAX WANTED

WANTED.—Comb and extracted honey. J. E. Harris, Morristown, Tenn.

WANTED.—Extracted light and amber honey. Give quantity and lowest cash price; can use good clean beeswax. D. H. Welch, Racine, Wis.

WANTED TO BUY a quantity of dark and amber honey for baking purposes. A. G. Woodman Co., Grand Rapids, Mich.

WANTED.—Extracted honey in both light and amber grades. Kindly send sample, tell how honey is put up, and quote lowest cash price delivered in Preston. M. V. Facey, Preston, Minn.

WANTED.—Extracted light and amber honey of good body and flavor from any state in the Union. Send sample with lowest cash price. M. E. Eggers, Eau Claire, Wis.

WANTED.—White and light amber extracted honey, in any quantity. White clover and raspberry preferred. I. J. Stringham, 105 Park Place, New York.

WANTED.—Extracted light honey of good flavor, white clover preferred. Kindly send sample, and quote lowest price delivered at Richmond, N. Y. J. Stevenson, Richmond, S. I., N. Y.

BEESWAX WANTED.—We are paying higher prices than usual for beeswax. Drop us a line and get our prices, either delivered at our station or your station as you choose. State how much you have and quality. Dadant & Sons, Hamilton, Illinois.

FOR SALE

FOR SALE.—A full line of Root's goods at Root's prices. A. L. Healy, Mayaguez, Porto Rico.

"BEST QUALITY" Foundation for sale. J. J. Angus, Grand Haven, Mich.

THE PERFECT Bee Frame Lifter. For descriptive circular address Ferd C. Ross, Box 194, Onawa, Iowa.

We carry a complete line of bee-supplies. Ask for our bee-supply catalog. Let us quote you on your requirements. Deroy Taylor Co., Newark, N. Y.

Beekeepers, let us send you our catalog of hives, smokers, foundation, veils, etc. They are nice and cheap. White Mfg. Co., Paris, Tex.

SEND TODAY for samples of latest Honey Labels. Not only the most attractive, but also the lowest in price. Samples free. Liberty Pub. Co., Sta. D, Box 4-E, Cleveland, Ohio.

FOR SALE.—30 Root 8-frame hives with supers and inside fixtures for the 4x5 plain sections, and also 20 extra supers for same. Price is right. G. L. Allen, Wysox, Pa., R. D. No. 4.

THE ROOT CANADIAN HOUSE.—73 Jarvis St., Toronto, Ont. (note new address). Full line of Root's famous goods; also made-in-Canada goods. Extractors and engines; GLEANINGS and all kinds of bee literature. Get the best. Catalog free.

300 gal. wire screens, nearly new, for 8-frame hives; 1 canvas and frame, 12 x 24; summer house; has 2½ wide screened space all around to be opened at will; just the thing for out-apiaries or camping. Used 3 months. F. W. Morgan, DeLand, Ill.

WANTS AND EXCHANGES

WANTED to hear from W. D. Hurt at once. W. A. Cheek, Merino, Colo.

BEESWAX WANTED.—For manufacture into Weed Process Foundation on shares. Superior Honey Co., Ogden, Utah.

WANTED.—To hear from everybody who would like to earn money making comb foundation. J. J. Angus, Grand Haven, Mich.

WANTED.—Shipments of old comb and cappings, for rendering. We pay the highest cash and trade prices, charging but 5 cts. a pound for wax rendered. The Fred W. Muth Co., 204 Walnut St., Cincinnati, O.

OLD COMBS WANTED.—Our steam wax-presses will get every ounce of beeswax out of old combs, cappings, or slumgum. Send for our terms and our new 1917 catalog. We will buy your share of the wax for cash or will work it into foundation for you. Dadant & Sons, Hamilton, Illinois.

GOATS

MILCH GOATS.—"Profit and Pleasure in Goat-Keeping," pronounced by experts the best goat book, regardless of price; profusely illustrated; by mail, 35 cents. Fred C. Lounsbury, Plainfield, N. J.

PATENTS

PATENTS SECURED or all fees returned. Patents sold free. Read "Patent Sales Dep." of our 190-page Guide Book, FREE. Send data for actual free search. E. E. Vrooman & Co., 834F, Wash., D. C.

REAL ESTATE

FOR RENT.—Small house and 20 acres of land near Dade City, Florida, on Lake Pasadena.
Steen Freeman, Wamsley, Ohio.

FOR SALE.—1½-acre home with 200 stands of bees adjoining good railroad town; full equipment, no disease; finest location and climate in Northern California. No failures. Sacrifice \$2500.
Ray Tait, Hornbrook, Cal.

A small farm in California will make you more money with less work. You will live longer and better. Delightful climate. Rich soil. Hospitable neighbors. Good roads, schools, and churches. Write for our San Joaquin Valley illustrated folders free.
C. L. Seagraves, Industrial Commissioner A. T. & S. F. Ry., 1934 Ry Exchange, Chicago.

SOUTHERN FARMERS ARE PROSPEROUS and contented. Favored by nature with mild climate, long growing season, and abundant rainfall, fruit, poultry, stock, trucking, and general farming succeed amazingly here. Little farms in Shenandoah Valley, colony of Little Planters, \$250 and up, complete, on easy payments. Good near-by markets, excellent transportation, low freights. Full information on request. F. H. LaBaume, Ag'l Agt. N. & W. Ry., 246 N. & W. Bldg., Roanoke, Va.

BEES AND QUEENS

Finest Italian queens. Send for booklet and price list. Jay Smith, 1159 DeWolf St., Vincennes, Ind.

Well-bred bees and queens. Hives and supplies. J. H. M. Cook, 84 Cortlandt St., New York.

When it's **GOLDENS** it's **PHELPS**. Try one and be convinced.

FOR SALE.—Italian queens. See large advertisement elsewhere. H. B. Murray, Liberty, N. C.

FOR SALE.—Golden Italian queens. Untested queens 60c each. J. F. Michael, Winchester, Ind.

Phelps' queens will please you. Try them and you will be convinced.

FOR SALE.—Bees, queens, and honey in their season. H. G. Quirin, Bellevue, O.

Queens for July and later delivery. No more rush orders till July 1st.
J. E. Wing, 155 Schiele Ave., San Jose, Calif.

Untested Italian queens for sale.—1, \$1.00; 3, \$2.75; 6, \$5.00; 12, \$9.00. Satisfaction guaranteed.
F. L. Johnson, Mt. Airy, N. C.

ITALIAN BEES AND QUEENS.—1, \$1.00; 12, \$9.00. Satisfaction guaranteed.
A. E. Crandall & Son, Berlin, Conn.

Three-banded Italian queens and a few hundred pounds of bees for sale. Safe arrival guaranteed.
J. A. Jones, Rt. 3, Greenville, Ala.

FOR SALE.—40 colonies of Italian bees. For particulars address
Henry S. Smith, Brooklyn, Wis.

FOR SALE.—Warranted queens from one of Dr. Miller's breeders, 50 cts. each.
Geo. A. Hummer, Prairie Point, Miss.

Warranted purely mated Italian queens, \$1.00. Safe arrival guaranteed.
J. B. Mason, Mechanic Falls, Me.

FOR SALE.—190 colonies of Italian bees. Ideal location for rearing queens and combless bees; two miles from New Orleans.
M. Stevenson, Westwego, La.

Tested leather-colored queens, \$2.00; after June 1, \$1.50; untested, \$1.00; \$10.00 per dozen, return mail. A. W. Yates, 3 Chapman St., Hartford, Conn.

Vigorous prolific Italian queens, \$1; 6, \$5, June 1. My circular gives best methods of introducing.
A. V. Small, 2302 Agency Road, St. Joseph, Mo.

Italian queens, **THE HONEY GATHERERS**. Price one dollar each, nine dollars a dozen. Edith M. Phelps, 259 Robinson St., Binghamton, N. Y.

"She-suits-me" bright Italian queens; \$1 by return mail till Oct. 1.
Allen Latham, Norwichtown, Conn.

Business first queens. Select untested, \$1.00 each; \$9.00 a dozen; no disease. Price list free.
M. F. Perry, Bradentown, Fla.

Queens that boost your bank account, three-band or golden. Untested, 75 cts.; tested, \$1.00; select, \$1.50. J. B. Marshall & Son, Rosedale Apiaries, Big Bend, La.

Finest Italian queens, June 1 to November, \$1.00; 6 for \$5.00; my circular gives good methods. Ask for one.
J. W. Romberger, 3113 Locust St., St. Joseph, Mo.

FOR SALE.—Bright Italian queens at 65 cts. each; \$6.50 per doz.; ready April 15. Safe arrival and satisfaction guaranteed.
T. J. Talley, Rt. 3, Greenville, Ala.

Southwest Virginia five-band Italian queens, the fancy comb-honey strain, gentle to handle. They will please you. Try one. \$1.00 each.
Henry S. Bohon, Rt. 3, box 212, Roanoke, Va.

Golden and three-banded Italian queens for July, Aug., and Sept. Now, only 50 cents each, 6 for \$3.00, 12 for \$6.00, virgins 30 cts.
G. H. Merrill, Pickens, S. C.

FOR SALE.—Golden Italian queens of an improved strain; the bee for honey, hardiness, gentleness, and beauty. Untested, \$1.00; tested, \$2.00.
Wallace R. Beaver, Lincoln, Ill.

FOR SALE.—Golden Italian queens that produce golden bees; for gentleness and honey-gathering they are equal to any. Every queen guaranteed. Price \$1; 6 for \$5. Wm. S. Barnett, Barnetts, Va.

QUEENS OF SUPERIOR QUALITY.—Untested, 75c each, \$8.00 per doz.; select untested, 90c each, \$9.00 per doz.; select tested, \$1.50 each, \$15.00 per doz.; extra select breeder, \$5.00.
H. N. Major, South Wales, N. Y.

FOR SALE.—Three-band Italian queens from best honey-gathering strains obtainable. Untested queens, 75 cts.; 6, \$4.25; 12, \$8.00. Safe arrival and satisfaction guaranteed.
W. T. Perdue, Ft. Deposit, Ala.

GOLDEN ITALIAN QUEENS.—No more orders filled after Sept. 1. Untested queens, each, 75 cts.; \$8.00 per dozen; \$60.00 per 100; tested, \$1.50 each. Prompt service and satisfaction guaranteed.
L. J. Dunn, 59 Broadway Ave., San Jose, Cal.

Golden Italian queens that produce golden bees; the highest kind, gentle, and as good honey-gatherers as can be found; each, \$1.00; 6, \$5.00; tested, \$2.00; breeders, \$5.00 to \$10.00.
J. B. Brockwell, Barnetts, Va.

QUEENS.—Improved three-banded Italians, bred for business, June 1 to Nov. 15, untested queens, 75 cts. each; dozen, \$8.00; select, \$1.00; dozen, \$10.00; tested queens, \$1.25 each; dozen, \$12.00. Safe arrival and satisfaction guaranteed.
H. C. Clemons, Rt. 3, Williamstown, Ky.

GOLDEN ITALIAN QUEENS! ! ! From the best stock; they produce Golden bees unexcelled as honey-gatherers; very gentle; no disease. Select tested, \$1.25; tested, \$1.00; select untested, 75c; untested, 65c; virgins, 35c. Special price on one-half dozen or more. Golden Queen Apiaries, R. Kornegay, Jr., Prop., Mt. Olive, N. C.

Bright Italian queens for sale at 60 cts. each, \$6.00 per doz.; virgins, 25 cts. each. Safe arrival and satisfaction guaranteed.

W. W. Talley, Rt. 4, Greenville, Ala.

FOR SALE.—100 colonies Italian bees, wired combs, 50 in 10-frame hives, 50 in 8-frame; new hives, covers, and bottom-boards; \$6.00 per colony.

E. L. Lane, Trumansburg, N. Y.

FOR SALE.—Italian bees and queens. One-pound, two-pound, and three-pound packages, with queens; also on frames and full colonies. Ask for our price list, free beginner's book, and bee-supply catalog.

Deroy Taylor Co., Newark, N. Y.

My bright Italian queens will be ready to ship April 1 at 60 cts. each; virgin queens, 30 cts. Send for price list of queens, bees by the pound and nucleus. Safe arrival and satisfaction guaranteed.

M. Bates, Rt. 4, Greenville, Ala.

GOLDENS THAT ARE TRUE TO NAME.—One race only, unt., each 75 cts.; 6, \$4.25; 12, \$8.00. For larger lots write for prices. Tested, \$1.50; S. T., \$2.00; breeders, \$5.00 and \$10.00.

Garden City Apiaries, San Jose, Cal.

Golden Italian queens from June to November, untested, 75 cts.; 6, \$4.25; doz., \$8.00; tested, \$1.25; 6, \$7.00; select tested, \$1.50; breeders, \$5.00. Bees by pound or nucleus. Pure mating guaranteed. Send for circular. J. I. Danielson, Fairfield, Ia.

None but the best Queens are sent out by us—three-band Italians that are guaranteed to give satisfaction. Untested queens, 75c; \$8.00 per doz.; tested, \$1.00 each. No disease. Orders filled promptly. J. W. K. Shaw & Co., Loreauville, La.

Golden Italian queens that produce gentle golden bees; good honey-gatherers; no foul brood. Select tested, \$1.25; tested, \$1.00; untested, 65 cts.; 6, \$3.75; 12, \$7.00. No nuclei or bees for sale.

D. T. Gaster, Rt. 2, Randleman, N. C.

FOR SALE.—Three-band Italian queens from best honey-gathering strains obtainable. Untested queens, \$1.00; 6, \$5.00; 12, \$9.00; tested queens, \$1.50 each; 6, \$8.00.

Robt. B. Spicer, Wharton, N. J.

Queens, Queens, Queens. We are better prepared than ever to supply you. Untested, 55c each; tested, \$1.00 each; select tested, \$1.65 each. See our big illustrated ad on first leaf of this journal.

W. D. Achord, Fitzpatrick, Ala.

My choice northern-bred Italian queens are hardy, vigorous, and prolific. May and June, untested, \$1.50; select unt., \$2.00; tested, \$3.00; after July 1, unt., \$1.00; select unt., \$1.25; tested, \$2.00; select tested, \$2.50. Free circular.

F. L. Barber, Lowville, N. Y.

Golden Italian queens from a breeder that was a first-premium winner at Illinois State Fair in 1916: untested, 75 cts.; six for \$4.25; doz., \$8.00; select untested, \$1.00; 6 for \$5.00; 12 for \$9.00; tested, \$1.50; 6 for \$8.00.

A. O. Heinzel, Rt. 3, Lincoln, Ill.

Phelps' Golden Italian Queens combine the qualities you want. They are great honey-gatherers, beautiful and gentle. Mated, \$1.00; six, \$5.00; dozen, \$9.00; tested, \$3.00; breeders, \$5.00 and \$10.00. C. W. Phelps & Son, Wilcox St., Binghamton, N. Y.

North Carolina-bred Italian queens of Dr. C. C. Miller's famous strain of three-banded Italian bees; July 1 until Oct. 1, untested, 75 cts.; per doz., \$8.00; tested, \$1.00; doz., \$11.00; select tested, \$1.50. Safe arrival and satisfaction guaranteed.

L. Parker, Rt. 2, Benson, N. C.

ITALIAN QUEENS, northern-bred, three-banded, highest grade; select untested, guaranteed; queen and drone mothers are chosen from colonies noted for honey-production, hardiness, prolificness, gentleness, and perfect markings. Price, one, \$1.00; 12, \$9.00; 50, \$30.00. Send for circular.

J. H. Haughey, Berrien Springs, Michigan.

FOR SALE.—45 colonies of bees, about 400 combs in Hoffman frames and other accessories, \$100.00.

S. K. Best, 1660 Emma St., Youngstown, O.

FOR SALE.—350 colonies of bees, mostly 10 frame, complete equipment of comb and extracting supers, tanks, sheds and shop, extractor and all supplies on hand. Possession by Stpt. 1. Object of sale, re-entering college.

Elton S. Stinson, Nampa, Ida.

TENNESSEE-BRED QUEENS.—My three-band strain that has given such universal satisfaction for over 40 years. Orders filled promptly or money refunded by first mail. 1000 nuclei in use. Tested, in June, \$1.75; untested, \$1.00; in July, \$1.50 and 75 cts. Postal brings circular.

John M. Davis, Spring Hill, Tenn.

Put a good queen in each colony now, when good queens can be had promptly at low prices. The wise beekeeper does not buy queens in spring when they are scarce, high in price, delivery uncertain. He buys now and insures disease resistance, safe wintering, and a good honey crop. Our Italian queens give these three qualities and are now at their best: 1, 75 cts.; 6, \$4.25; 12, \$8.00; 25, \$15.00; 100, \$50. J. B. Hoppeler, Queenbreeder, Rockton, Pa.

Golden 3-band Italian and Carniolan queens: Virgin: 1, 50c; 6, \$2.50; 12, \$4.00; 100, \$25.00. Untested: 1, 75c; 6, \$4.20; 12, \$7.80; 100, \$60.00. Select untested: 1, 85c; 6, \$4.80; 12, \$9.00; 100, \$70.00. Tested: 1, \$1.00; 6, \$5.40; 12, \$10.20; 100, \$80.00. Select tested: 1, \$1.25; 12, \$13.80; 100, \$100. Breeders: \$3.00 each. Bees in combless packages: ½ lb., 75c; 1 lb., \$1.25; 2 lbs., \$2.25. Nuclei: 1 frame, \$1.25; 2 frames, \$2.25; 3 frames, \$3.00. Add price of queens wanted. We guarantee safe arrival and no disease.

C. B. Bankston, Buffalo, Tex.

Queens of my own and Dr. C. C. Miller's 3-banded select stock the rest of this season, 75 cts. each; \$65.00 per 100; tested, \$1.50 each; \$15.00 per dozen; breeders, \$5.00 and \$10.00. A fine breeder sent on two frames of brood in nuclei, \$10.00.

Curd Walker, Jellico, Tenn.

I think so much of my Walker queens and bees that I have been able to induce my friend Mr. Walter Hall to try one. I am quite sure he will find them as good as I recommend. I have in my apiary queens from four different breeders of queens, but the Walker beats them all. When I want more queens yours are good enough for me even if the price is a little steep. J. M. Meadows, Dorton, Tenn.

HELP WANTED

WANTED.—An experienced apiarist. State wages wanted, and experience: about 4 months' work.

W. A. Cheek, Merino, Colo.

TRADE NOTES

BEESWAX MARKET.

With a slackening demand the market for beeswax is easier, and it is offered at prices at least three to six cents per pound lower than were being asked several weeks ago. The wax which we take in from this time on for some months is accumulated for next season's use in making comb foundation. Since we shall not need it for some time, we are not so keen to buy as we were a few weeks ago in the height of the season. In view of an easier market and a less urgent need we reduce the price we pay from this date to 36 cts. per lb. cash, or 38 cts. in trade delivered in Medina. One to two cents less at our branches.

GLASS JARS FOR HONEY.

After a good deal of delay we have furnished the 1-lb. round jars offered in the April issue from Alton, Ill., to those who placed their orders in response to that notice. We also laid in a stock of a

car each in Chicago, Des Moines and St. Paul, which we offer for a short time, to reduce stock, at \$1.10 per case of 2 dozen; 6 cases for \$6.30; 30 cases or more at \$1.00 per case. These prices are below present values, and the revised prices in our new issue of the catalog now in preparation are 10 cts. a case higher. Send in your orders direct to our Des Moines, St. Paul, and Chicago branches, mentioning this notice, and get them in during this month of August, remittance accompanying the order, to avail yourselves of this special price.

HONEY CANS AND PAILS.

The new catalog in preparation will have still higher prices on cans and pails, tho not as high as recent quotations from several factories would require if we had to buy on today's market. We have a good stock, bought some time ago, and for a short time only will accept orders at the prices last issued, which are below what we would have to pay if we were buying today. These prices, available for a short time only, are as follows:

Five-gallon cans, 9 to bundle, weight 23 lbs., \$3.60. Five-gallon cans, 50 to crate, weight 190 lbs., \$20.00. Five-gallon cans, 2 to box, \$1.25 each; 10 for \$12.00. Five-pound friction top pails, \$17.00 per crate of 200; 50 for \$4.50. Ten-pound friction-top pails, \$13.00 per crate of 100; 50 for \$6.75.

With such high prices prevailing on new cans there has been an unusual call for second-hand cans, and we have been oversold all season, and have none to offer now. We have been getting for good second-hand cans as much as new cans sold for two years ago, and still we cannot supply the demand for them.

OLD-STOCK SHIPPING-CASES.

In view of the advance in price of new-stock shipping-cases for 24 sections, comb honey, of \$4.00 per 100 over list prices, the old stock which we have been closing out becomes more attractive when you compare prices at which these are offered with new prices. We still have available here and at some of our branch offices quite a lot of 12 and 16 lb. cases for sale at \$8.00 per 100 for 12-lb.; \$8.50 for 16-lb. We have the largest stock for the $4\frac{1}{4} \times 1\frac{1}{2}$ -inch plain section. In an emergency these could be used for ten $4\frac{1}{4} \times 1\frac{1}{2}$ sections. If interested let us hear from you, stating the size of section you want to case, and we will advise you what we have to offer.

We also have several hundred nailed-up cases, once used, and good for use again. These are offered at \$10.00 per 100 as they are. If new corrugated pads and drip-papers are furnished, add \$2.00 per 100 to provide these. We have the largest stock for regular $4\frac{1}{4} \times 1\frac{1}{2}$ sections, but have also some of the other sizes. Let us hear from you if you can use any of these. If carriers are wanted to reship your comb honey, add 75 cts. each. These hold 8 cases each.

ADVANCED PRICES.

As we go to press we are preparing to issue another edition of our catalog with prices revised to date. This is a general revision involving almost everything listed. A very few items are left unchanged in the retail list. Others are advanced ten to forty per cent, the average advance being about twenty per cent. All hives and parts of hives, supers, frames, section-holders, separators, sections, shipping-cases—in fact, practically everything made of wood as well as metal—are marked up. The advance in the price of lumber at present over prices prevailing a year or eight months ago is, for such grades and kinds as we use, fully forty per cent. In fact, to secure an adequate supply of dry pine for hives we have paid for a large lot of a higher grade than we ordinarily use one hundred per cent more than we were paying a year ago. In view of these advancing costs we believe the moderate advance we are making will be considered reasonable and entirely justified under the existing circumstances.

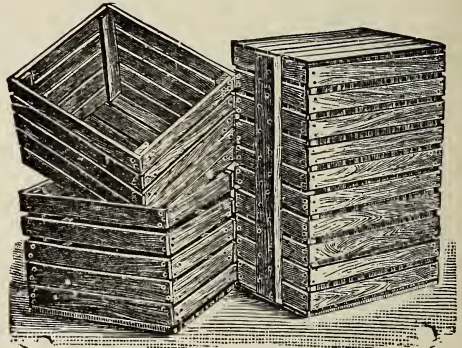
We had hoped to give in these columns in detail many of the new prices, but find we do not have time before going to press to get them into type. We will mention only a few of the outstanding changes.

Sections of all styles are advanced \$1.50 per 1000. Shipping-cases, \$4.00 per 100 in regular and safety styles. Honey-extractors are again

marked up ten per cent, making twenty since the first of the year. Hoffman frames are up 70 cts. per 100; shallow frames are up 50 cts. per 100. Section-holders and fences are marked up 50 cts. per 100. Hives and supers in general about 20 to 25 per cent. If interested, send for revised catalog, which we hope to have in print early in August.

METAL SPACERS SLIGHTLY DEFECTIVE.

In making the metal spacers for the metal-spaced frames there is a percentage which come out either sheared a little scant on one side, or with slight breaks in the tin where it is drawn up into the spacing-boss. These are hardly passable as perfect stock, but in actual use they will answer every purpose as a spacer. Rather than throw these into the scrap we will offer them while they last, including nails to nail them on, at 25 cts. per 100; \$2.25 per 1000. Transportation charges extra.



BUSHEL BOXES FOR POTATOES.

In order to realize cost at the new higher price of lumber we shall of necessity have to mark up the price of bushel boxes. These are reasonable just now for handling the new crop of potatoes, which ought to be large if not blighted. As we have a good stock of these boxes, as shown, we will accept orders for a short time, only to reduce stock, at former prices; namely, \$2.40 per crate of 14, all slatted, or \$22.80 for 10 crates. Two boxes are nailed up; and twelve more, including the nails, are packed inside. Crate weighs 90 lbs. Orders should be sent to Medina.

Special Notices by A. I. Root

GOOD BOOKS BY PROF. SHANNON.

I have several times of late, as our readers may remember, mentioned Professor Shannon's "purity" books. Well, I find on my table three booklets. The title of the first one is, "Did God make Boys and Girls equally Good?" This book contains 27 pages. To give you an inkling of its contents I quote the first paragraph:

"Each year I address tens of thousands of bright, hopeful boys and girls in our public schools and Sunday-schools. I begin one address by asking, 'Did God make boys morally better than girls?' To this question comes only one reply, 'No.' As a second question, I ask, 'Did God make girls to be better than boys?' Here I often find a difference of opinion; some holding that he did, nearly all holding that he did not. To the question, 'Did God make boys and girls equally good?' the replies quite generally indicate that they believe he did. Then, I ask, 'If God made them to be equally good, why do boys and men swear a hundred times where girls and women swear once; use a ton of tobacco where girls and women use a pound; drink a barrel of whisky where girls and women drink a pint; twenty go to jails, reformatories, and penitentiaries, where one girl or woman goes?' This is a puzzling question to them. Many are ready to believe that perhaps after all God made girls better than he made boys."

The second book is entitled, "Did God make Men

and *Women Morally Equal?*" I quote from this book two paragraphs from the first page.

"In our land and age more women accept Christ and unite with the churches than men. Twenty times as many men are in our jails, reformatories, and penitentiaries as women. In respectable society men swear a hundred times where women swear once; drink a barrel of whiskey where women drink a pint; use a ton of tobacco where women use a pound; sow their 'wild oats' where women must sow purity and love.

"That women are better than men by practice, I cheerfully admit. That women are better by nature than men, I positively deny."

This booklet has 29 pages.

The last one on the list is a booklet of 27 pages entitled "Modern Use of Tobacco," by D. H. Kress, M. D. It comes from the No-tobacco League of America. I make quotations from it as follows, from pages 7, 8, and 25.

"A cable message from London to the *Chicago Tribune* stated: 'The cigaret is playing havoc with the British army, and if something is not done soon, Great Britain will be defended, or rather left undefended, by a collection of weak-minded and weak-bodied youths incapable of real effort.'"

"We are rapidly becoming a nation of smoke-inhalers; and the number which we now produce, including imported and hand-rolled cigarets, amounts to about one hundred millions a day."

"The people of the United States are now spending annually one and one-half billion dollars for tobacco. This is twice as much as we spend for bread, three times as much as we spend for education, and five times as much as we spend for Christianity. Our tobacco money would buy all our drygoods, including boots and shoes, and have a surplus large enough to pay all expenses of our army and navy. Our tobacco bill amounts to about \$50 per second, night and day. It is not possible for a nation that persists in this reckless manner to poison itself, long to survive."

The above extracts will, I think, convince you, without doubt, the importance of having these booklets read and studied thruout the whole wide world; and with this thought in view the following low prices have been determined on by the publishers:

One copy, 3 cts.; 3 of a kind, or assorted, 10 cts.; in lots of 100, at cost. Address Prof. T. W. Shannon, Delaware, Ohio.

BOOKS AND BULLETINS

EXPERIMENTS WITH SWEET CLOVER at the Ontario Agricultural College extend over a period of 25 years. The yield of hay per acre was not very different from that of alfalfa for the first year. If the crop is to be used for hay production it seems essential to cut it before any bloom appears. It was found that cattle refused the hay at first, and would have to be starved to make them develop the acquired taste for the bitter flavor of sweet clover. It was shown by a two-year experiment, also, that alsike, mammoth red, and common red clovers, all excelled sweet clover in affording pasturage. Such, in brief, is the verdict of the Ontario station. It does not sound as roseate as some of the reports in this country. Possibly the difference in soil would make the difference. The same report also states that some beemen in Canada had reported that they had found the flavor of the honey from sweet clover objectionable to the average customer; also that it was objectionable as winter stores. The article concludes by saying: "It would seem that on the whole the importance attached to sweet clover as a honey-plant by beekeepers

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"Make money first, but make it last," is an old saying that contains a world of wisdom.

Many people find it easier to make money than to keep it. For this reason the best plan is to open a **Savings Account BY MAIL** in this strong institution and deposit all surplus funds.

Accounts may be opened with small as well as large sums, and deposits may be easily and safely sent in the form of check, draft, money order, or the currency by registered mail.

Write for detailed information about this plan that assures complete safety and 4 per cent interest.

THE SAVINGS DEPOSIT BANK CO. MEDINA, OHIO

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E. B. SPITZER, Cashier.

ASSETS OVER ONE MILLION DOLLARS

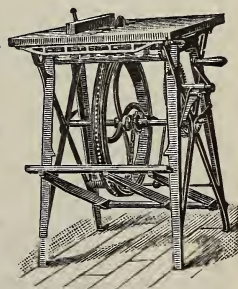
BARNES' Hand and Foot Power Machinery

This cut represents our combined circular saw, which is made for beekeepers' use in the construction of their hives, sections, etc.

Machines on Trial

Send for illustrated catalog and prices

W. F. & JOHN BARNES CO
545 Ruby St
ROCKFORD, ILLINOIS



Books and Bulletins - Continued

in Ontario is much less than is generally supposed."

PUBLICATIONS PERTAINING TO BEE-KEEPING. The following publications are no longer available in the Department of Agriculture, but may be obtained from the Superintendent of Documents at the prices indicated. Remittances should be made to the Superintendent of Documents, Government Printing Office, Washington, D. C., by postal money order, express order, or New York draft. If currency is sent, it will be at sender's risk. Postage stamps, defaced or worn coins, foreign coins and uncertified checks, will not be accepted. Here is the list: Ent. Bul. 55, Rearing of Queen-bees, 5 cents; Ent. Bul. 70, Report of Meeting of Inspectors of Apiaries, San Antonio, Texas, Nov. 12, 1906, 15 cents; Ent. Bul. 75, Part I, Production and Care of Extracted Honey, 5 cents; Ent. Bul. 75, Part II, Wax-moths and American Foul Brood, 5 cents; Ent. Bul. 75, Part III, Bee Diseases in Massachusetts, 5 cents; Ent. Bul. 75, Part IV, Relation of Etiology (Cause) of Bee Diseases to Treatment, 5 cents; Ent. Bul. 75, Part V, Brief Survey of Hawaiian Beekeeping, 15 cents; Ent. Bul. 75, Part VI, Status of Apiculture in

The Threshing Problem Solved

Threshes cowpeas and soy beans from the mown vines, wheat, oats, rye, and barley. A perfect combination machine. Nothing like it. "The machine I have been looking for for 20 years." W. F. Massey. "It will meet every demand," H. A. Morgan, Director Tenn. Exp. Station. Booklet 102 free.

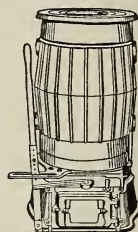
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Morristown, Tenn.

VICTOR and HOME VICTOR

Multiple System Water Heaters for House Heating

Heats bath and kitchen boiler too. ONE STOVE AND ONE FIRE YEAR ROUND. There is nothing like it. Send for booklet.

S. V. Reeves, Mfr.
Haddonfield, N. J.



"Best" Hand Lantern



A powerful portable lamp, giving a 300 candle power pure white light. Just what the farmer, dairyman, stockman, etc. needs. Safe—Reliable—Economical—Absolutely Rain, Storm and Bug proof. Burns either gasoline or kerosene. Light in weight. Agents wanted. Big Profits. Write for Catalog. THE BEST LIGHT CO.
306 E. 5th St., Canton, O.

DAISY FLY KILLER

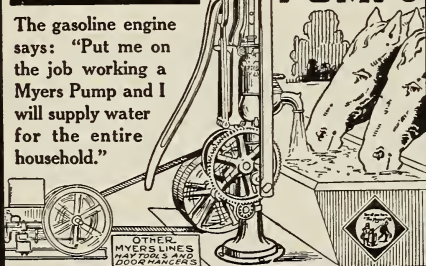


placed anywhere, attracts and kills all flies. Neat, clean, ornamental, convenient, cheap. Lasts all season. Made of metal, can't spill or tip over; will not soil or injure anything. Guaranteed effective. Sold by dealers, or 6 sent by express prepaid for \$1.

HAROLD SOMERS, 150 DeKalb Ave., Brooklyn, N. Y.

MYERS POWER PUMPS

The gasoline engine says: "Put me on the job working a Myers Pump and I will supply water for the entire household."



If your day is still measured by so many trips to the well or cistern, heed the message the gasoline engine and Myers Pumps brings, and quit working a pump handle every day of your life.

Be fully prepared for the hot, dry weather—Get a MYERS POWER PUMP or PUMPING JACK and give your engine steady employment, then you will have an efficient, economical, labor saving plant that will furnish water for your home, for stock, for dairy, for fighting fires, sprinkling and many other purposes.

25,000 MYERS POWER PUMPS sold last year indicates their popularity. You can make a choice from many styles and sizes—all shown in our catalog, Myers Pumps for Every Purpose. If interested, write. Our Service Department solves your pumping problems free—take advantage of it.

F.E. MYERS & BRO.
351 ORANGE ST. ASHLAND OHIO.

Eastern Beekeepers

This is the time you will need hives, sections, and foundation. Let us mail you our catalog giving prices on everything a beekeeper needs. We furnish full and nucleus colonies, bees by the pound, and queens.

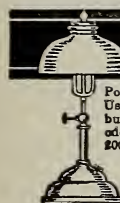
A 3-fr. nucleus colony and Italian queen in a shipping-box, \$5.10; tested Italian queens, \$1.50; untested, \$1.10.

Our location enables us to get goods to you promptly.

I. J. Stringham, 105 Park Pl., N. Y.
Home Apiary: Glen Cove, L. I.

Books and Bulletins—Continued

United States, 5 cents; Ent. Bul. 75, Part VII, Beekeeping in Massachusetts, 5 cents; Ent. Bul. 75, Parts I-VII, complete with Contents and Index, 30 cents; Ent. Bul. 98, Historical Notes on Causes of Bee Diseases, 10 cents; Ent. Bul. 121, Behavior of Honeybee in Pollen-collecting, 5 cents; Ent. Cir. 138, Occurrence of Bee Diseases in United States, 5 cents; Ent. Cir. 157, Cause of European Foul Brood, 5 cents; Ent. Cir. 161, Manipulation of Wax Scales of Honeybee, 5 cents; Ent. Cir. 169, Sacbrood, a Disease of Bees, 5 cents; Ent. Tech. Series 18, Anatomy of Honeybee, 20 cents; Dept. Bul. 92, Destruction of Germs of Infectious Bee Diseases by Heating, 5 cents; Dept. Bul. 93, Temperature of Honeybee Cluster in Winter, 5 cents; Dept. Bul. 96, Temperature of Bee Colony, 5 cents; Dept. Bul. 325, Honeybees: Wintering, Yields, Imports and Exports of Honey, 5 cents; Dept. Bul. 431, Sacbrood, 10 cents; Dept. Bul. 489, Survey of Beekeeping in North Carolina, 5 cents; Journal of Agricultural Research, Vol. VIII, No. 11, Spore-forming Bacteria of the Apiary, 15 cents; Chem. Bul. 154, Chemical Analysis and Composition of Imported Honey from Cuba, Mexico, and Haiti, 5 cents; Hawaii Agric. Exp. Sta. Bul. 17, Hawaiian Honey, 5 cents; P. R. Agric. Exp. Sta. Bul. 15, Porto Rican Beekeeping, 5 cents.



The "BEST" LIGHT

Positively the cheapest and strongest light on earth. Used in every country on the globe. Makes and burns its own gas. Casts no shadows. Clear and odorless. Absolutely safe. Over 200 styles. 100 to 5000 Candle Power. Fully Guaranteed. Write for catalog.

AGENTS WANTED EVERYWHERE.

THE BEST LIGHT CO.
306 E. 5th St., Canton, O.

Miller's Strain Italian Queens

By Return Mail

Northern-bred from my best *Superior Breeders*; in full colonies; for business; three-banded; gentle; hustlers; winter well; not inclined to swarm; roll honey in. Untested, 75c; 6 for \$4.00; 12 for \$7.50. Select untested, \$1.00; 6 for \$5.00; 12 for \$9.50. Virgins, 1 to 3 days old, 50c each, at sender's risk. Safe arrival and satisfaction guaranteed in U. S. and Canada. Specialist of 20 years' experience.

Isaac F. Miller, Brookville, Pa.
Route 2

CASH paid for butterflies, insects. Some \$1 to \$75 each. Easy work. Even two boys earned good money with mother's help and my pictures, descriptions, price list, and simple instructions. No needless killing, etc. Send 2c stamp at once for prospectus.

SINCLAIR, Box 244, D 62, Los Angeles, Cal.



QUEENS

Quirin's Improved Superior Italian Bees and Queens. They are Northern Bred and Hardy. . 25 Years a Queen-breeder.

PRICES	Before July 1st			After July 1st		
	1	6	12	1	6	12
Select untested....	1.00	5.00	9.00	.75	4.00	7.00
Tested	1.50	8.00	15.00	1.00	5.00	9.00
Select tested	2.00	10.00	18.00	1.50	8.00	15.00
2-comb nuclei	2.50	14.00	25.00	2.25	12.00	22.00
3-comb nuclei	3.50	20.00	35.00	3.25	18.00	32.00
8-frame colonies	6.00	30.00		5.00	25.00	
10-frame colonies	7.50	38.00		6.50	32.00	
1-2 lb. pkg. bees	1.50	7.00		1.00	5.00	
1-lb. pkg. bees	2.00	10.00		1.50	8.00	

BREEDERS.—The cream selected from our entire stock of outyards; nothing better. These breeders, \$5.00 each.

Can furnish bees on Danzenbaker and L. or Hoffman frames.

Above price on bees by pound, nuclei, and colonies does not include queen. You are to select such queen as you wish with the bees, and add the price.

No bees by pound sent out till first of June. Also nuclei and colonies, if wanted before June 1, add 25 per cent to price in table.

Breeders, select tested and tested queens can be sent out as early as weather will permit.

Send for testimonials. Orders booked now. Reference—any large supply dealer or any bank having Dunn's reference book.

H. G. Quirin, Bellevue, Ohio

Queens from Dr. C. C. Miller's Best Breeders

We have made arrangements with Dr. C. C. Miller to keep us supplied with some of his best breeders, and are rearing queens from these superior mothers that we guarantee to be as good as can be reared. These queens are not just individuals that have made a good yield; we all have some colonies that made a good showing, but all do not have a strain that holds the world's record as his does. Think of it—a whole yard of 72 colonies averaging 266 sections weighing 244 pounds. You are getting at a low price the results of fifty years of careful breeding of one of the most successful beekeepers in the world. Safe arrival and entire satisfaction guaranteed on all goods sold.

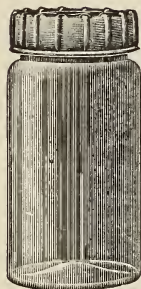
One untested Miller queen, \$1.00, \$11.00 per dozen. Tested, \$2.00. Ex. Select Tested, \$3.50. Breeders, \$5.00 to \$10.00 each.

One pound bees, \$1.25; ten or more, \$1.00 per pound. Two pounds, \$2.25; ten or more, \$2.00 each. One frame nuclei, \$1.25; two frame, \$2.25; three frame, \$3.25. Add price of queen wanted. Full colonies a specialty.

The Stover Apiaries
Starkville, Miss.

Glass Jars at Special Prices to Close Out Stock

FEDERAL OR SIMPLEX JAR, 1-LB., IN CASES OF 2 DOZ. EACH.



At Medina, 45 cases, 2 doz. each, at \$1.10; 6 for \$6.30; \$1.00 per case for lot.

At Washington, D. C., 3 bbls. of 12 doz. each, at \$5.25 each; \$15.00 for lot. 2 crates of 12 doz. each, \$5.25 each; \$10.00 for lot.

At Mechanic Falls, Me., 26 cases of 2 doz. each, at \$1.10; 6 for \$6.30; \$1.00 per case for lot.

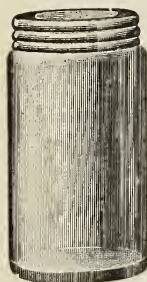
At St. Paul, 2 cases of 2 doz. each, at \$1.10; \$2.00 for lot.

At Chicago, 65 cases of 2 doz. each, at \$1.10; 6 for \$6.30; 30 or more at \$1.00.

At Philadelphia, 37 cases of 2 doz. each, at \$1.10; 6 for \$6.30; \$1.00 per case for lot.

At New York, 18 cases of 2 doz. each, at \$1.10 per case; \$1.00 per case for lot.

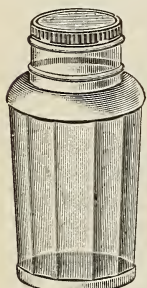
ONE-POUND ROUND JAR IN PAPER RESHIPING CANS OF 2 DOZ. EACH.



This is the only jar we have retained in our catalog this season. We are provided with a carload of stock at Chicago, another car at St. Paul, several hundred cases at Des Moines, Iowa. We have over a thousand cases at Medina, a few hundred each at Philadelphia, New York, and Mechanic Falls, Me. This stock, while it lasts, will be sold at \$1.10 per case; 6 cases, \$6.30; 100-case lots at \$1.00 a case. New stock cannot be obtained for months after orders are placed, and prices will be much higher. Get your supply while there is stock available. In the

same style of jar, 15-oz. capacity, we have at Mechanic Falls, Me., 300 cases, which we offer at the same price.

TAPER-PANEL JARS IN TWO SIZES, 1 AND 1/2 LB., PACKED IN CASES OF 2 DOZ. EACH.



At Medina, 7 cases, 2 doz. each, 1/2-lb., 90 cts. per case; \$6.00 for lot.

At Washington, D. C., 19 cases, 2 doz. each, 1/2-lb., 90c per case; 85c lots of 6 or over; 28 cases, 2 doz. each, 1-lb., \$1.10 per case; \$6.30 for 6; \$1.00 case for lot.

At Mechanic Falls, Me., 21 cases, 2 doz. each, 1-lb., \$1.10 per case; \$6.30 for 6; \$1.00 case for lot.

At St. Paul, 23 cases, 2 doz. each, 1/2-lb., 95 cts. case; \$20.00 for lot.

At Chicago, 30 cases, 2 doz. each, 1-lb., \$1.10 per case; \$6.30 for 6; \$1.00 case for lot; 10 cases, 2 doz. each, 1/2-lb., 90 cts. per case; \$3.50 for lot; 3 1/2 gross in crates of octagon jars holding about 1 pound, very similar to the 1-lb. taper-panel, only straight, offered at \$3.50 per gross; \$10.00 for lot.

At Philadelphia, 28 cases, 2 doz. each, 1-lb., at \$1.10 or \$6.30 for 6; \$1.00 case for lot; 84 cases, 2 doz. each, 1/2-lb., at 90c per case, or 85c in lots of 6.

At New York, 21 cases, 2 doz. each, 1-lb., at \$1.10 per case; 42 cases, 2 doz. each, 1/2-lb., at 90 cts. per case.

MASON FRUIT-JARS IN THREE SIZES, PUT UP 1 DOZ. IN A CASE.



At Medina, 123 doz. 1-pint jars, 50 cts. a doz.; \$5.70 for 12 doz.

At Medina, 136 doz. 1-quart jars, 55 cts. doz.; \$6.00 for 12 doz.

At Medina, 42 doz. 2-quart jars, 85 cts. a doz.; \$9.00 for 12 doz.

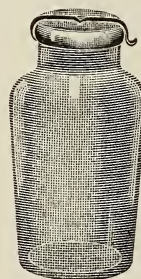
At Mechanic Falls, Me., 10 doz. 1-pint jars, 50 cts. a doz.; \$4.75 for lot; 59 doz. 1-quart

jars, 55 cts. a doz.; \$6.00 for 12 doz; 13 doz. 2-quart jars, 85 cts. a doz.; \$9.00 for 12 doz.

At Philadelphia, 20 cases of 1 doz. each, 1-pint Premium jars, at 65 cts. per doz.; \$12.00 for lot; 7 cases of 1 doz. each, 1/2-gal. Premium jars, at \$1.10 per doz.; \$7.00 for lot.

At New York, 20 cases, 1 doz. each, pint Mason, at 50 cts. doz.; 8 cases, 1 doz. each, pint Premium, 65 cts. per case; \$4.80 for lot.

TIP-TOP JARS WITH GLASS TOP, RUBBER RING, AND SPRING TOP FASTENER.



At Medina, 8 crates, 1 gross each, 1-lb., at \$5.50 per crate; 27 cases, 2 doz. each, 1/2-lb., at \$1.00 per case; lot at 90 cts.

At Washington, D. C., 8 cases, 2 doz. each, 1/2-lb., at \$1.00 per case; lot at 90 cts.; 11 cases, 2 doz. each, 1-lb., at \$1.10 per case; lot at \$1.00. 3 crates, 1 gross each, 1/2-lb., at \$5.00 per crate; \$14.00 for lot.

At St. Paul, 6 cases, 2 doz. each, 1-lb., \$1.10 per case; \$6.00 for lot.

At Chicago, 25 cases, 2 doz. each, 1-lb., \$1.10 per case; \$25.00 for lot.

At Philadelphia, 7 crates; 1 gross each, 1-lb., at \$5.50 per crate; 287 cases, 2 doz. each, 1-lb., at \$1.10 per case; lot at \$1.00 per case; 4 crates, one gross each, 1/2-lb., at \$5.00 per crate; \$19.00 for lot; 10 cases, 2 doz. each, 1/2-lb., at \$1.00 per case; lot at \$9.50.

At New York, 39 cases, 2 doz. each, 1-lb. tip top, at \$1.10 per case; 10 cases, 2 doz. each, 1/2-lb. tiptop, at \$1.00 case; 10 crates, 12 doz. each, 1-lb. tiptop at \$5.50 per crate; 4 crates, 12 doz. each, 1/2-lb. tiptop, at \$5.00 per crate.

SQUARE JARS WITH CORKS IN VARIOUS SIZES.

At Medina, 8 cases, 1 gross each, 1/2-lb., with cork, \$3.75 per case. 22 cases, 2 doz. each, 1-lb., spring top, \$1.10 per case. 2 cases, 6 doz. each, 2-lb., with cork, \$3.75 per case. 21 cases, 2 doz. each, 1/4-lb., with aluminum screw cap, 75 cts. per case, 70 cts. per case for lot.

At Washington, D. C., 2 gross 1-lb. sq. jars with cork, \$5.00 per gross. 1 gross 2-lb. sq. jars with cork, \$7.50 per gross.

At St. Paul, 18 cases, 1-lb. sq. jars with cork, \$1.10 per case, \$18.00 for lot. 3 cases, 1/4-lb. sq. jars with cork, 75 cts. per case, \$2.00 for lot. 1 case, 1/2-lb. sq. jars with cork, 90 cts. per case. 1 case, 2-lb. sq. jars with cork, \$1.50 per case. 1 case, 1/2-lb. round Hersher jar with aluminum cap, \$1.00. 1 case, 1-lb. round Hersher jar with aluminum cap, \$1.20.

At Chicago, 6 cases, 1/4-lb. sq. Hersher jar with aluminum cap, 70 cts. case. 8 cases, 1-lb. sq. Hersher jar with aluminum cap, \$1.20 case. 2 gross, 1/4-lb. sq. Hersher jar with aluminum cap, \$3.75 gross, \$7.00 for lot. 1 gross, 1-lb. sq. Hersher jar with aluminum cap, \$6.00.

At Philadelphia, 8 crates, 1/2 gross each, 2-lb. square jars, at \$3.75 per crate or \$7.50 per gross.

At New York, 17 cases, 2 doz. each, 1/2-lb. square with cork, at 90 cts. per case; 2 cases, 2 doz. each, 2-lb. square, at \$1.50 case; 14 cases, 6 doz. each, 2-lb. square, \$3.75 per case; \$7.50 per gross.

Send orders to Medina for stock listed as being at Medina or to the branch where stock is listed.

The A. I. Root Company, Medina, Ohio

QUEENS

For Sale

Red-clover 3-band Italian queens; Root's, Moore's, Davis,' extra-select stock, mated with Geo. H. Hows' famous select drones. I know none better for honey-gathering, wintering, beauty, etc. I guarantee 90 per cent pure mated if queens are returned to me. Queens or money back in a reasonable time. No foul brood, no bee disease; apiaries inspected by Mr. Rea and Prof. Franklin Sherman, Jr. Mr. Rea is our bee inspector of this state.

	Price before July			After July 1st		
	1	6	12	1	6	12
Untested queen .	.75	4.00	8.00	.75	3.25	6.50
Select untested .	.80	4.50	8.50	.80	3.75	7.00
Tested	1.25	6.00	10.00	1.25	5.00	9.00
Select tested . . .	1.50	8.00	13.00	1.50	6.00	10.00
Extra select tested	2.00	10.00	15.00	2.00	8.00	13.00
½ lb. bees with qn	2.00	10.00	16.00	1.75	8.00	14.00
1 lb. bees with qn	2.50	12.00	20.00	2.00	10.00	17.00

I can furnish bees in lots of 25, 50, and 100 pounds. I am in position to give prompt service this season. My bees are of a famous foul-brood-resisting strain.

H. B. Murray . . Liberty, N. C.

Queens of MOORE'S STRAIN of Italians

PRODUCE WORKERS

That fill the super quick
With honey nice and thick.

They have won a world-wide reputation for honey-gathering, hardiness, gentleness, etc.

Untested queens, \$1.00; six, \$5.00; 12, \$9.00.

Select untested, \$1.25; six, \$6.00; 12, \$11.00.

Safe arrival and satisfaction guaranteed.

Circular free.

J. P. MOORE,

Route 1, MORGAN, KY.

Queen-breeder

Queens of Quality

Select, three-banded, leather-color Italians—bred for honey production. . .

Untested queens, 75c each; 6, \$4.25; 12, \$8.00. . . Descriptive circular free.

J. I. Banks, Dowltown, Tennessee

Rhode Island Northern-bred Italian

Queens, \$1.00. Circular.

O. E. TULIP, ARLINGTON, RHODE ISLAND

QUEENS

Select Italians; bees by the pound; nuclei. 1917 prices on request. Write

J. B. Hollopeter . . Rockton, Pennsylvania

SWARMING CONTROLLED

If interested, address Charles Thompson, Marion, Iowa, for information.

AROUND THE OFFICE

M.-A.-O.

There is a good deal sometimes in knowing something that isn't so. What leads me to this sagacious observation is the fact that Mr. A. I. Root and I are quite generally regarded as making a perfect 100 per cent garden team—he knows all about it and I know nothing—just zero. Add 'em together, tho, and that makes 100 per cent, doesn't it? But allthesame he has just recently taught me something about gardening that puts me in an unshakable position to say that I know something that *isn't* so about gardening, anyway. I tried to use this newly acquired education the other day, and now I and my poor little babies have got to go without cucumbers and water-melons this summer and without Hubbard squash all next winter. You see it was this way: "Uncle Amos" and I had been conspiring in cahoots this spring and early summer against the certain oncoming ravages of the squash bug—that little yellow and black-striped limb of Satan. Oh, he's the meanest little puke of a garden bug on the whole footstool! You know him. Well, we had discussed tobacco dust and wood ashes and Killebug's slugshot, and flour, and arsenate of lead, and mosquito netting, etseterra, etseterra, etc. In due time, our squash and melon vines hove in sight—and so did the squash bug. In fact, he was waiting when they hove. He also had his coat and vest off, his sleeves rolled up, and his teeth manicured when the first trusting little squash vines poked the tip of themselves out into this cruel world. He took the tips off and then sank shafts for the roots. He also got 'em, too—all the first ones, before "Uncle Amos" and I got onto him and got-a-goin'. Of course, we were madder than the devil ("Uncle Amos" didn't say that—get solid on that point, for I'll get hauled up on it and can say I explained it wasn't he that said it). As I was saying, we were madder than the devil ("Uncle Amos" didn't say it, remember), and we began using thumb-and-forefinger pincers on them, tobacco dust, poison and choke stuff alot. The dingdanged squash bug wasn't the only pebble in our gardens when "Uncle Amos" and I finally got into full action, and he needn't think he was—nosiree. He was getting most of the squash vines, but we were getting a few of him and some revenge, occasionally, too. He didn't always escape even if he did drop off the edge of the leaf on sight at 40 rods—not if we had got him filled up and dizzy with a half dozen kinds of poison, he didn't



Baby Nucleus

This youngster has always eaten lots of honey. Let us produce so much honey that all babies can have it. To produce big crops you must have young vigorous queens. We raise that kind. Send for our booklet descriptive of our gentle, high-grade **Italian Queens**. \$1.00 each; \$9.00 per dozen.

JAY SMITH,

1159 De Wolf St.

Vincennes, Indiana.

Mott's Northern-bred Italian Queens

are hardy, prolific, gentle, and hustlers, therefore resist well disease.

Untested, 75c each; \$8.00 for 12.

Sel. Tested, \$1.50 each.

Virgins, 50c each; or three for \$1.00.

Bees by pound.

Plans "How to Introduce Queens," and "Increase," 25c. List free.

E. E. MOTT, Glenwood, Mich.

Beginner's Book of 28 Pages, Free
Also our 44-page Bee-supply Catalog for 1917 is ready for mailing. Ask for your copy now.

OUR PRICES ON BEES AND QUEENS: 1 lb. of bees with queen, \$2.25; 10 lbs., \$20.50; 100 lbs., \$190.00; 1 frame with queen, \$2.00; full colonies, one-story hive included, \$8.75; untested queens, 75c each. Our complete price list free, and safe delivery guaranteed.

The Deroy Taylor Company, Newark, N. Y.

PATENTS

Practice in Patent Office and Courts
Patent Counsel of The A. I. Root Co.

Chas. J. Williamson, McLachlan Building
WASHINGTON, D. C.

Around the Office—Continued

Other times, he 'most always did, for that striped bug gets wilder than a hawk and smarter 'n a fox after you have hunted him about three times. You don't more than have to come around the corner of the barn and he parachutes off the squash leaf and just ain't anywhere any more when you get there. He's the most disappearing little cuss — now-you-see-him-and-now-you-don't — that I've ever seen. Get within shouting distance of him, and he'll fly. Did you ever see where he lit without contracting eye strain? You have not. But why go on in this polite way, when you can use only Root parlor language about this orneriest, provokingest, dingedanged meanest bug that roams the garden? No use. It doesn't satisfy. But I tell it to him (the bug) to his face right when I get him between my thumb and forefinger first joint. Oh, I do tell him! But—I am losing the thread of this argument. I was saying that "Uncle Amos" and I were using dusts, poisons, and fingers and thumbs on this miscreant—his bugship getting most of the vines and we getting all the work and most of the anguish of spirit. Things were running along this way, with the bugs generally having a majority, when early one morning a few days ago "Uncle Amos," all aglow, entered the palatial journalistic parlors where I toil from early morn till dewy eve for kopeks and grub, and said that he had got it now for sure. I didn't know just what he had got, for he might have had 'most anything from the way he acted, so I asked him. He had a sure cure for squash bugs—catch'em, pinch'em into the great beyond, and place their still quivering mortal remains prominently on a leaf, about one erstwhile squash-bug to a leaf. The deceased bug was just to lie up there conspicuously dead and scare the liver, lights, and lungs out of every live bug that came in sight. Well, everybody shook hands, the office cat began purring as of old, and it seemed a cheerful world again. I hastened home that noon and evening, neglected my family and every other duty, and dove for the garden. Once there, I ran walked, scooched down, crawled, dug, came up from behind on 'em, advanced on the flank and right obliqued on the port side of 'em, balanced, forwarded and backed—and altogether mighty nearly out the final binger on myself getting 17 bugs—about one bug cadaver for every 12 squash leaves that the bugs had left intact. But I put squashed squash bugs on the most conspicuous leaves and then I went to the house, enjoying to the full a sense of duty done and victory won. I told my wife so. I played with the

Around the Office—Continued

children. I was awful nice to everybody that evening. Chested up considerably and told one of my neighbors who chanced to drop in that I didn't have to go to the garden to hunt bugs any more—I had 'em frazzled. And I just didn't go for about three days. I put in the time telling about the victory. Then about the third morning I went. As I rounded the corner of the old barn the whirr of wings sounded like a covey of partridges going out of a beechnut grove. My! but they had got fat—and equally populations. I guess they had. Yet they didn't fill the garden so full but that I could squeeze in and see that all that was left of the squashvines looked like the filagree work of a 25-cent "guaranteed gold" breast-pin bought at a county fair. Now, that's about all there is to this story, except that I have grown cool and suspicious, and even haughty toward "Uncle Amos" as a bug exterminator. As I said in the first place: There is a good deal sometimes in knowing something that isn't so—especially if you try it on.

* * *

Blessings on the few true men of America who have written to the Editors interceding for the Man-Around-the-Office lest he be removed on out thru the back cover

Bees and Queens

Full Colonies, Nuclei and Pound Packages

We have about the finest lot of bees we ever had before in our history. We have now the Wardell strain, which has been moved to Medina, and we also have our celebrated Pritchard strain, both of which have so far shown themselves to be practically immune to European foul brood. Our yard has been carefully inspected by the State Inspector and we are prepared now to furnish queens and bees in pound lots, nuclei or full colonies.

We are also to furnish our fine strain of queens, Italians that are bred for business as well as immunity to European foul brood.

Untested Italian Queens, each..	\$1.00
3 Untested Italian Queens, for...	5.00
6 Untested Italian Queens, for...	5.00
12 Untested Italian Queens, for...	9.00
25 Untested Italian Queens, each..	.70
50 Untested Italian Queens, each..	.67 1/2
100 Untested Italian Queens, each..	.65
Select untested, each.....	\$1.25
Tested, each	2.00
Select tested, each.....	3.00
Home-bred virgin .....	.50
Breeding queens from \$5.00 to \$25.00	

We are now able to make prompt shipments from Medina, in most cases by return express. Remember that we are the pioneers in the combless packages of bees and our guarantee is very broad and liberal.

The A. I. Root Co., Medina, O.

Queens Hardy, Long-lived, and Disease-resisting Queens

20 YEARS OF SELECT BREEDING GIVES US QUEENS OF HIGHEST QUALITY
QUEENS FOR HONEY PRODUCTION—QUEENS OF UNUSUAL VITALITY

"There are few queens their equal and none better"

What Bees Do Headed By Our Queens

"One swarm made 185 sections of honey and another 296 sections. I am well pleased."
Kimmell, Ind. MELVIN WYSONG.

"Your bees averaged 150 lbs. of surplus honey each. I find them not only hustlers but also gentle."
Meradosia, Ill. FRED H. MAY.

"I have tried queens from several different places and like yours best of all."
Alabama, N. Y. C. O. BOARD.

"We are only one mile from Lake Erie, and exposed to high cold winds; in fact, this is the windiest place along the Great Lakes. Your bees were able to stand the winter with only an insignificant loss, and we would have no others. As for honey they averaged 175 pounds of extracted surplus, did not swarm, and gave an artificial increase of 30 per cent, which is as fine a record as can be had in this locality, especially when the work is done entirely by amateurs."

Name furnished on request, North East, Pa.

Price List of Golden and 3-Band Italian Queens by Return Mail.

Untested .....	.50 cts. each, \$45.00 per 100	Tested	\$1.00 each, \$ 90.00 per 100
Select untested .....	.65 cts. each, \$50.00 per 100	Select tested	\$1.25 each, \$110.00 per 100

We Guarantee Our Queens to Arrive Safely, That They are Very Resistant to European Foul Brood, and, in Fact, to Give Full and Complete Satisfaction.

Wings clipped free of charge.

Our Capacity is 1500 Queens Monthly.

M. C. BERRY & COMPANY, Hayneville, Alabama, U. S. A.

Around the Office—Continued

page of GLEANINGS forevermore—'raus mit im. J. E. Crane, by his charitable reference in July GLEANINGS, has won a place in my affections for quite awhile to come. Anyway, I've recently decided not to be fired, editors or no editors, and to stick back here in these back pages like a puppy to a root.

Now that that plaguey, heart-breaking, all-winter-and-half-the-summer experiment of trying to mate queens in a big greenhouse is ended, I want to tell you readers that we are a chop-fallen crowd. We thought we were going to be smarter than anybody—and we slipped up. That's just it—we slipped up. Of course, we didn't claim anything in advance nor toot our horns previously, but we had 'em all ready to toot loud, I'll tell you that, and it was sort of humiliatin' to have to put 'em away without a chance for even one single toot. How like thunder and blazes we hated to come right out in GLEANINGS, too, and say we had foozled. Gosh! how we *did* hate that! It almost prostrated me and the Root crowd, and it completely subdued Mel Pritchard, our queen-rearer. He has got an awful low opinion of drones right now. Says they just bumped their old fool heads against the iron beams of that green house till their heads ached so that they didn't know a virgin queen from an airship.

The American Bee Journal editors in their July issue say: "The production of honey from dandelions has always been an unknown quantity to us here," but "this year, for the first time, we can report that our own bees gathered honey from dandelions," etc. I suppose it's sort of mean in me, but I just wish that while dandelion honey was yet an "unknown quantity" to them they had put a dandelion picture on their first cover page and in an article on the inside flashed the information on the bee-keeping world that "the dandelion produces little or no honey." Seems to me I've read somewhere that misery gets along better with company. Gosh! I do wish they had got their foot into it too!—and they "might of," for all I can see.

Here's another good use to which to put honey. A beekeeper living at Brownstown, Ind., writes: "From 23 colonies of bees we have sold enough honey to send our oldest boy to college." If that boy will be as industrious at college as are the bees back home that are paying his board, room and tuition he will get something out of college more than football, cigars and a class yell.

By Return Mail

Choice Italian Queens

Each . . . \$.75 Six \$4.25
Twelve . . 8.00 Twenty-five 15.00

J. B. Hollopeter, Rockton, Pa.

Increase Your Honey Crop

by introducing some of Leininger's strain of Italian Queens which have a record of 30 years as to honey-gathering qualities and gentleness are unexcelled. Disease has never appeared in our apiaries. Queens will be ready June the first. Untested each, \$1; 6, \$5. Tested, each \$1.25; 6, \$5.50. Breeders, \$5.

FRED LEININGER & SON, Delphos, Ohio

SOUTHERN BEEKEEPERS

Get the Famous Root Goods Here

Veils, 65c; Smoker, 90c; Gloves, 65c pair; wire-imbedder, 35c; honey-knife, 80c; 1-lb. spool wire, 35c; medium-brood foundation, 1 to 11 lbs. 58c per lb.; 11 to 25 lbs., 56c; 50 or 100 lb. lots, 53c. Ten-fr. wood-zinc excluders, 50c each; Hoffman frames, \$3.75 per 100. Honey-extractors for sale. I am paying 28c cash, 29c trade, for wax.

J. F. Archdekin, Bordlonville, Louisiana.

Queens . . Queens

From a strain of Italians, wintered for thirty years in the foothills of the Adirondack Mountains out of doors. Hardy, gentle, industrious, and fine resisters of disease. \$1.00 each, or \$9.00 per dozen; also nuclei and full colonies.

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GLUE HANDY BOTTLES
FOR EMERGENCIES 10c

QUEENS

Our July, August, and September SPECIAL PRICE on untested leather-colored and Golden queens---a bargain never offered to the American beekeeper before.

Prices on	1 to	10	queens, 60 cts. each
"	11 to	25	queens, 55 cts. each
"	26 to	100	queens, 50 cts. each
"	100 to	1000	queens, 48 cts. each

Safe delivery. If not satisfied, return queens, and get your money back. The Root Company, The American Bee Journal, Dadant & Sons, any mercantile agency, and others will tell you who we are.

The Penn Company . . Penn, Miss.

Friction-top Cans and Pails

We can now furnish friction-top cans and pails at the following prices f.o.b. Chicago, Keokuk, Iowa, or Hamilton, Illinois: : :

2-lb. cans in crates of 612—per crate.....	\$26.75
2½-lb. cans in crates of 450—per crate.....	22.50
2½-lb. cans in cases of 12—per case.....	1.40
5-lb. pails in crates of 200—per crate.....	16.00
5-lb. pails in crates of 100—per case.....	8.25
5-lb. pails in crates of 100—per crate.....	8.25
10-lb. pails in crates of 100—per crate.....	12.50
10-lb. pails in cases of 6—per case.....	.95

The above prices are low considering the present price of tin-plate. Send in your orders at once.

Dadant & Sons, Hamilton, Illinois

Queens . Queens . Queens

We are making a specialty of untested queens, and are prepared to send either large or small quantities out promptly, generally by return mail. Every queen guaranteed to be entirely satisfactory. Goldens after June 15th at the same price. We spare neither labor nor money in producing the best queens. Quality counts the most with us.

One queen, 75c; 12, \$8.00; 25 to 1000, 60c each. After July 15, one, 55c; 12, 50c; 25, 45c. One pound bees, \$1.25; 10 or more, \$1.00 per pound. Two pounds, \$2.25; 10 or more, \$2.00 each. One frame nuclei, \$1.25; two frame, \$2.25; three frame, \$3.25. Add price of queen wanted. Full colonies a specialty.

The Stover Apiaries, Starkville, Mississippi

After June 20 address will be Mayhew, Miss.

QUEENS OF QUALITY

Capacity of Yard over 1000 Queens a Month

After 20 years of careful selecting and breeding I now have a strain of bees that cannot be excelled by any. . . . My queens are all bred from IMPORTED STOCK, the very best in the world for honey-gathering and gentleness. They are not given to swarming. What more do you want in bees than the three above qualities?

	1	6	12		1	6	12
Untested	\$.50			Tested	\$1.25	\$7.00	\$13.00
Select untested..	.75	4.25	8.00	Select tested . . .	2.00	11.00	20.00

GUARANTEE.—You take no risk in buying my queens, for I guarantee every queen to reach you in first-class condition, to be purely mated, and to give perfect satisfaction. All queens that do not give satisfaction I will replace or return your money. Send for circular.

L. L. Forehand, Ft. Deposit, Alabama

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"LINE BRED" for the past 31 years. They are VERY hardy, gentle, prolific, great workers, and builders of VERY WHITE combs, and use mostly wax in place of propolis. Untested queen, \$1.00; six for \$5.00; dozen for \$9.00. Select untested queen, \$1.25; six for \$6.00; dozen for \$11.00. Tested queen, \$2.00; six for \$9.00; dozen for \$15.00. Select tested, \$3.00. Best breeder, \$5.00. Extra select, very best we have, \$10.00. Safe arrival guaranteed in United States and Canada. No foul brood here.

F. A. LOCKHART & COMPANY . . . LAKE GEORGE, NEW YORK

QUEENS... Select Three-banded Italian or Leather-color. . . .

Queens' wings clipped free of charge. Safe arrival guaranteed.			
Untested	one, \$.75	twelve, \$ 8.00	
Select untested . . .	" .90	" 9.00	
Select tested	" 1.50	" 15.00	
Extra select breeder	" 5.00		

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One that will keep the hive chock full of bees at all times, make the biggest yields of honey, sting less, and look the prettiest, at a medium price.

Over 25 years of select breeding has brought our queens up to a standard surpassed by none, and the superior of many. We have tried the principal races and every method known, and now we have selected the best race and method—the **THREE-BAND BEES** and the **DOOLITTLE METHOD**. We **USE THE 3-BANDS**—Why? Because they get results.

Dr. Miller, Roots, and Dadants use them.

Our queens are sold by many of the largest dealers in the U. S.

Louis H. Scholl (one of the largest beekeepers of the Southwest) says, "Three-band Italians have proven the best all-around-purpose bee after trying out nearly every race—not only in an experimental way while still at A. M. Col., but in our own apiaries as well." (In Beekeeper's Item.)

Untested	One, \$.50	Six, \$3.00	Twelve, \$ 6.00
Select untested	One, .75	Six, 4.75	Twelve, 8.00
Tested	One, 1.50	Six, 8.75	Twelve, 17.00

Write for price on larger quantities.

Send for circular giving general description. Mail all orders to

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The season is drawing nearer and beekeepers should endeavor to order early. By making up your wants now you will be better fitted to go into the season with a view of not only obtaining a bigger crop but to facilitate matters thruout the season. If you will make up a list of requirements for quotation we shall be glad to quote.

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THREE-BANDED ITALIANS THE BEST. They are hustlers, gentle to handle, cap their honey white, are very resistant to European foul brood. Some call them Long-tongue Red-clover Queens. Satisfaction and safe arrival guaranteed.

	1	6	12	50	100
Untested queens, June to November	\$.80	\$4.40	\$ 8.00	\$30.40	\$ 60.00
Tested queens, June to November	1.00	5.20	9.60	36.00	70.00
Select tested queens, June and November	1.60	8.00	14.00	52.00	100.00

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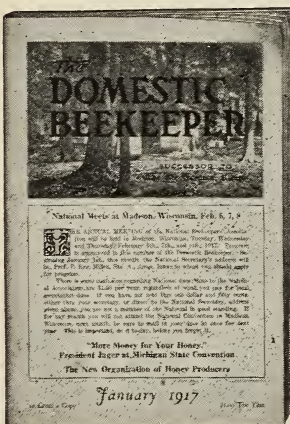
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